

Greene, June 10, 1872.

My Dear Dr. Gray:

I can not express  
my delight at the prospect of seeing  
you, and of having the honor of a  
visit or tour with you in these  
Rocky Mountains.

Many thanks also, for the photo.  
I am somewhat surprised to see so  
young a face for years. I had supposed  
that one who has been so long dis-  
tressed, must now be very aged.  
I hope nothing will transpire to prevent  
your coming next summer.

Yours very much obliged  
Edw. L. Greene.

Vallejo, Oct. 28/1874.

Dear Dr. Gray:--

It is quite inspiring to get such a report as you send, on my little parcel.

Had I anticipated getting any new species on my little trip to the Geysers last summer, I should have been more careful to collect copiously of some things. The new *Acerates*, No. 291, was brought to me by Mr. Yowle, a member of our party. He told me where he found it so that I can probably find it for myself another season.

239, looked so peculiar that I hunted carefully, and yet only could obtain what you see, for I send you the next to the last specimen, with a flowering branch taken from the very last one I have: so that I am not at all confident of getting it again.

But there are ripe seeds in this lost specimen which I send, from which if you are very careful you may perhaps raise a few plants.

The rays of *Pentachaeta exilis* are clean white; and the flower of the minute *Gutierrezia* is bright yellow.

Well. Since I wrote, I have made an unanticipated trip to the Sierra Nevada and in this second parcel I send you some of my gleanings in that field.

My *Orthocarpus* I also send, begging that you will correct wherein I may be wrong in my determinations of them.

The *Cordylanthus* from the Salt marshes - ~~sent~~ I can't make out whether it is *C. maritimus* Nutt. or your *C. ~~altiss~~ mollis*. but from the two stamens, and the character of the pubescence I take it to be the latter - yet it is too abundant - all up and down the bay to have been so overlooked as *mollis* has been. However, you can tell me about it. And by the way - growing with it is a

tall (3<sup>d</sup> - 4<sup>th</sup> high) *Senecio* - smooth glaucous stems and long <sup>entire</sup> leaves, of which as I have it in memory - I can find no account in any book, nor did Kellogg or Bloomer know anything about it from my description. I neglected to collect it until it was too late, and only got at last some leaves and flowers of a single plant. At the time of my seeing it first I thought it must be some common, and well known coarse *Senecio*. I wish I had put my fragments in this parcel, but I forgot it until now all is tied up, and ready to go.

— *Collinsia* - as you are about to revise the genus - I noticed in Lake Co. a very common large species with ochroleucous flowers, of which I got but one specimen - I was so loaded down with other things - you must have this from Bolander - Of all the rest that I have collected I have sent you specimens. I would ~~have sent~~ <sup>send</sup> you one specimen of this if I thought you had any need of it.

As ever yours

J. C. Greene.

be interesting in Colo. the  
coming season.

As Ever Yours,  
Edw. L. Greene.

Vallejo. Feb. 23; 1875-

Dear Dr. Gray:-

Your two pages  
of names last received contain  
a few questions for me to answer.  
You ask if 256. *Leutellaria antemini-*  
*-oides* var. has yellowish flowers. Yes,  
in most of my specimens they are so,  
though the fresh flowers were nearly  
white, with a yellowish tinge. I also  
have a single specimen with blue  
flowers, - that - a branching plant,  
whereas the whitish-flowered one has  
the stems simple.

332, which you call *Scirpus*  
*riparius* Rost., has a distinctly  
though not sharply triangular  
culm. It grows in the salt marshes  
in sluggish or stagnant waters  
within reach of the ~~tide~~ tides, and



the common S. validus,  
Vahl. grows with it.  
All my specimens of Eritrichium  
Chorisianum have those very short  
pedicels. And now I  
am done with California, at-  
least for some months. My  
address will be Georgetown, Colo.  
until I give you further notice.  
I presume you did not know that  
my parents' home was between  
Denver + Georgetown. My mother  
died three months ago, and  
the feeble state of my father's health  
demands that I should be near  
him. This is why I must now  
leave California. I start within  
two weeks. I have received  
your paper on "So varieties wear  
out", for which, and other  
favors unnumbered I always  
thank you. I dare not promise  
to gather anything that will

Georgetown Colo.

Feb. 27, 1876.

Dear Dr. Gray—

I sent you  
a postal card last Oct.  
telling you I was going back  
to California. I did not  
keep my word. I am  
here still. I may stay  
here for the next ten  
years! But really I  
mean by the 1<sup>st</sup> of April  
to be in Calif. The  
place where I am going  
I am sure it will please

you to hear the noise of  
rumbling - and to see  
it sounding like a cross  
between ancient Greek, and  
modern English fiction -  
through it.  
My address is 26 York  
St. Birmingham Co. away  
at Watson Mt. Shasta &  
"Clearwater River"  
I can hardly sleep at night  
since I have received my  
shipment - & that  
pile of measuring labor,  
as depicted on  
I have now a pretty ample  
supply of pens & in  
kind: but soon to  
compare a single one  
on all my things  
furniture and all:

but just heretofore & my  
heart's content, "Deo volente  
et diabolo nolente" as Ch. Lamb  
would have it.

How about the Glorn of Calif?  
Is any part of it out yet,  
and if it is when can I get  
it? I wish you would answer  
this by postal card at least,  
directing to Greeley Colo, where  
I shall be from the 10th to the  
15th of March.

I see by Coulter's "Bulletin"  
that another paper of your  
"Contributions" are out.  
That I shall be glad to  
see, indeed impatient to  
get a hold of. I presume  
you have already sent me  
a copy to some place;  
though perhaps you have



Am making jumps &  
such an impression  
as I am to h.  
Very truly Yours,  
Wm. L. Greene.

Yreka, June 27. 1876.

Dear Dr. Gray:

Herewith I mail

to you another parcel.

On top is another specimen of Isopyrum stipitatum, which you can send to Kew. I carelessly made few specimens of it. When I found it was not I. Hallii I thought it would likely be something very well known.

Lepidium eraba. of which there is a bunch of mature fruit on top of parcel. I found in an old field that has not been cultivated, nor grazed for years, they say.

It grows with Achyrocline mollis and other native weeds.

I shall have to send you a specimen of another European

Plant which you say in Port. Cal. has  
not been found on Pacific coast, i.e.  
Verbascum Thapsus. It seems  
tolerably well established at several  
points in Licking Co. though  
apparently not so well at home  
here as Eastward.

Very Truly & Sincerely Yours,

Edw<sup>d</sup> L. Greene.

In short, this species is the common  
tamed of this region, thriving  
everywhere. But not a specimen  
of M. sativa have I seen in the  
County! One Hastmannia and  
one Calycadenia are the only  
Hemizonias I have detected here  
thus far. "Verbena prostrata" is  
common, and the stems never more  
than a little decumbent at base.  
No. 242 which you call a var. of  
Collinsia Grayi is very abundant on  
certain mountain-sides at an  
elevation of about 6000 ft. The  
upper lip is, as you observe,  
yellowish white.

I have another considerably different form  
for you now, from higher up - very  
likely the typical form.

Very sincerely Yours  
Edw. L. Greene.

Yreka, July 18, 1876.

Dear Dr. Gray:

Your letter with  
report on my last parcel, also the  
tickets and some pages of reviews  
are all received to my great  
delight. Seeds of 298 Polemonium  
are not yet fully ripe for a general  
gathering, but I enclose herewith  
a few of the earliest to ripen,  
that you may see what they look  
like. The proposed specific  
name of 'carneum' is better  
for the dried than for the fresh  
specimens. You might drive  
along a mountain side where  
the plants were in full bloom  
without seeing anything of the  
color which suggests that name.  
In the corollas that might be lying  
on the ground you would find it.



When, as sometimes happens, it grows in a deep shade you might almost say the flowers are white; but in the half-sunny situations which it prefers, they are light-salmon color, assuming the purplish or fleshy tint only after becoming detached from the receptacle, and actually falling to the ground.

The white-flowered *Knuthia* of the west are remarkable for the change of color which their corollas undergo in drying; but this plant is more so.

It is the constant (under cultivation) delicate salmon of the flowers which makes it so much admired by our amateur floriculturists of Lyckla.

Name it what color you please, if it needs a name, but do not think that it ever, in growing, shows such a color as the dried specimens display. —————

And that "809" which made me think I had no correct notion of how to distinguish *Maclia* and *Hemizonia* puzzles you. It is common enough and without variations. It has rays about half as large as those of *Maclia elegans* in its most depauperate forms, of a paler yellow with never any red at base. It is strongly lemon scented, a nice thing to hold near the nose, though this fragrance seems to reside in the glandular upper part of the stem and about the heads only. It blooms in May, and is ~~soon~~ after seen no more of.

The earlier and smaller forms of *Maclia elegans* come into flower at the same time, but later and larger ones appear in close succession, as the weeks and months of summer advance. There are plenty of them ~~now~~ in flower that would measure four feet in height.

Greka, July 27, 1878.

My Dear Dr. Gray: I mail  
now another, though a very  
small parcel, tickets enclosed  
herewith. I will send you  
a big package after a week or  
two. These seeds are of  
Clome platycarpa.

Botanizing in the immediate vicinity  
of Greka is about over for this  
year. A few Bigelovias and  
an Eriogonum or two are all I  
see to wait for, and they, I believe  
are no rarities.

I want to climb Mt. Shasta  
now soon. On Goose Nest  
I got Spirea Millefolium, but  
it has not yet in flower.

Yours as always.

E. L. Greene.

H. puberulum, and you will tell me if my name for this is wrong?

742<sup>a</sup> + 912. I believe these are both a little different from "742. Collinsia Goyayi var?" Is either of them the true C. Goyayi?

I dare not rely on my own determinations of those Plagiobothroids. 739, I suppose to be E. fulvum, 761. I think is E. canescens, but whatever it is, there are some characteristics of the plant that need mentioning. It can not be E. circumscissum (which, however I have never met with) yet the calyces are as perfectly circumscissile as can be! see my mature specimens.

It is a handsome little plant, one of our earliest bloomers. The children gather it for their bouquets, and it stains their fingers a carmine red. This is from an exudation from the margins of the leaves. Rub them on wood or paper and the color when dry is a deep

Yreka, Aug. 17, 1876,

My Dear Prof. Gray;

On some of the contents of the parcel mailed to you to-day I wish to add further remarks as follows:

7 No 885 + 885<sup>a</sup>. These fine perennials of our moist meadow lands, I in early Spring took to be Sidalcea malvaeflora, but their flowering proved them something quite different. I even judge by the beaked akenes that they are not Sidalceas at all. I also at the time of collecting took them for one species, but I now discover that they differ a good deal in pubescence, and in shape &c of akenes. The specimens of both are too small. 885 grows often to the height of six ft. 885<sup>a</sup> is as often three or four ft. high. So they appear to me they are not described

in the Bot. Cal. but since in all probability they are plants not unknown to you, I am very anxious to know to what genus and species you refer them.

884. - I have no specimen of H. subpinnata as it grows in the central part of the state. This looks as if it could be a variety; but the flowers are of a very different color, and the whole plant is three or four times too large for your account of H. <sup>sub</sup>pinnata, and my recollection of it. This specimen I send you is quite too small & fairly represent the plant's size.

877. I suspect this is distinct from A. alnifolius, but I will have to study the things more particularly, and get sufficient material for you next year. The undoubted A. alnifolius has (perhaps not always) a nice edible fruit. This bush, with entire, and more coriaceous leaves has a dry berry, consisting of large seeds enclosed in a thin very

tough rind of a junicarp. It is a bush six or eight feet high growing in "clumps" with rigid divaricate branches, forming a round compact chaparral-like mass; very unlike the habit of the true A. alnifolius.

869. The form of the leaves, and the yellow disk flowers, as well as the more slender habit make it look unlike the plant of the plains far eastward. But I suppose it is the same. H. annuus (the cultivated one) has been grown here for 20 years or more, and in escaping from cultivation it returns to something almost precisely like the H. lenticularis of Colorado.

The handsome light yellow of the longer narrower rays of H. petiolaris would be one mark by which to distinguish that plant from all the forms which I have seen of H. annuus i.e. H. lenticularis.

876. It does not look like the plant of the lower country which I took for



sort of magenta. 749. I take for  
E. tenellum, but please let me have  
your authority for their names.

Phlegbotomys has plaguily-bothered me  
for more than two years, and I never  
sent you any specimens before.

744. This does not seem to fall into  
any of the genera in the Bot. Cal.  
Yet it might be passed by for a form  
of Eritrichium Chorisianum if one  
did not examine it. I did not  
notice its peculiarities till long after  
it was past its season.

I have found just one specimen (in  
fruit) of your Cynoglossum  
occidentale.

876. This too, in the time when I  
ought to have made a good lot of nice  
specimens of it, I neglected, taking  
it to be M. Multiflora; so I only  
broke off a couple of branches with which  
to prove, as I thought the occurrence  
of that species in this region.

But happening now lately to notice  
the fruit I see it is very different  
and probably a new species.

I have seen it at different places  
through a distance of forty miles, so  
it is no rarity here.

As ever Yours,

E. L. Greene.

This var. glabratus, id. 95. Huel & Hook.  
of the Rocky Mt. region is wholly  
herbaceous and no variety of the  
present species, if I who know both well  
may judge. E. L. G.

Yreka, Sept. 5, 1876.

My Dear Prof. Gray:  
Two or three weeks ago I got all ready to go down to Strawberry Valley and from there up Mt. Shasta. But I rather suddenly changed my mind and started off to some high mountains in quite another direction. The Scott Mountains run about westward from Mt. Shasta. The point at which I ascended them lies about 40 miles west from Mt. Shasta. I obtained quite a number of the plants that I should have looked for on Mt. Shasta; and I send you to-day a little parcel containing some of the things which I found. Perhaps I shall now

for this year leave Mt. Shasta  
unvisited. I received a letter  
from Dr. Engelmann the other  
day, containing so many questions  
about oaks and conifers of this  
region that it will take me  
all the rest of the autumn to  
become able to answer the  
half of them.

In the last letter I had from  
you you asked me to "get older  
states, and seeds of 809.". I had  
sought both a month before, on  
receiving your first remarks on  
the plant, but in vain. I  
went to a spot where it had grown  
in great abundance with Madia  
elegans, but found only the dead  
stems, the last seeds even, having  
apparently been scattered long before.  
but M. elegans its associate was still  
blooming, and is so even now.  
It is wholly distinct from M. elegans.

and I will try to get a better  
variety of material next year,  
in the way of matured specimens  
and ripe seeds.

I hope you and Mrs. Gray are  
safely back from your southward  
tour, and that I shall hear  
from you soon about the contents  
of that parcel I sent you  
some three weeks since.

Yours. Very Truly  
Edw'd S. Greene.

P.S. Tied up between the boards  
outside of this present package  
is a specimen of the woody  
part of Lupinus ornatus. Lxyl.  
These woody stems are often two  
feet high and two inches thick  
at base! Yet this species has  
always been put in with the wholly herbaceous  
Lupines. I wanted Mr. Watson to  
see for himself, that it is a shrub.

Yreka. Oct. 11, 1878.

Dear Dr. Gray:

I send you to-day  
still another small parcel.  
On the top are several forms of  
*Claytonia perfoliata*, and next  
to them, as many forms of  
what I hold to be the very distinct  
*C. exigua*, the differences between  
which I indicated in a letter  
some months ago.

That 744. is in aspect so strikingly  
different from *E. Californicum*  
which grows with it, and from  
all the other *Eritrichia* I have  
seen, that upon seeing the  
fruit I came to the conclusion  
it would be likely to form a new  
genus. I did not at that time  
know that there was a sub-  
-glochidiale var. of *E. Californicum*.



The character which you see in  
those specimens a constant.

It is a very common plant on  
the streets of Yoka and all over  
the western portion, of the  
surrounding plains.

What are you going to call that  
new Mirabilis, no 876?

The plant from Socot Mts, which  
you call Claytonia Sibirica is, as  
you infer perennial by the  
bulb at base of stems.

The proper number for Chelone  
memorosa is 1019, and for  
Pentstemon Kingii 1021.

No 1000 you call var. eradiatus  
of Aster Shastensis, but you  
do not remark that 1038 ~~is~~  
which you call A. canescens is  
also wholly destitute of rays.

What about that - 1051, which I  
suppose to be Bigelovia grandiflora  
with a well developed ray flower

in almost every head?

I saw only one bush of it - and  
wondered if it was not a hybrid  
between The Bigelovia, and the  
Aphloppus Blomieri (I think  
it is) which grow near it.  
The little Pectocarya has no more  
appearance of being a foreigner  
here than have the common  
Entrichia.

Very Truly Yours,

Edw'd L. Greene

send

Ynkeu, Nov. 3, 1876.

Dear Dr. Gray:

This no 1008,

of which I enclose another spec-  
imen refer with a doubt to

Claytonia libirica. You better  
look at it again. When I

was collecting it I took it for

a Calandrinia. Am I not

right in still thinking it

is one. The bracted raceme!

And then, the bulbiferous

perennial root - might certainly

be distinguish it. It grew

in a moist woodland -

If you change your opinion about

it please send me a postal card.

Yours &c

E. L. Greene.

Silver City, New Mexico  
April 9. 1881.

Dear Mr. Gray:

I believe I wrote  
to you some two months since &  
told you that I was coming back  
and going across Arizona.  
I am now in the south western  
corner of New Mexico and I feel  
that I am just about the spring  
and summer. Please then give  
address me at Silver City, Grant  
Co. N.M. whenever you have  
anything to communicate.  
Mr. & Mrs. Watson will I hope  
still remain here with their  
young ones. I am not sure  
yet that any more will  
be taken out of the  
nest.

my & send you a huckie within  
a few days.

I do not know how you are using  
your field this way & when I can  
visit, but I shall much find  
it interesting.

Yours truly

W. L. Greene







1 Newell Colorado, Nov. 7, 1892

My Dear Mr. Gray,

I cannot be trouble other,  
and Mr. Tolson for number to those three  
letters I am sending, and the Solidago.

The *Lythrum* I suppose is a form of *L. undulatum*  
but the plant looked very odd with its very many  
small heads and short stems. *Callitriche* *virginica*  
has not been noticed in Colorado before I think and  
therefore I send you a specimen which grows in a  
shrub in my farm in Bergen Park, at which  
place in open moist-meadow lands. *Trigonotis*  
*americana* *folium*, *argus*, in a prostrate condition  
appears in greater luxuriance than I have seen  
it elsewhere.

I reached Fort Garland two days after you were  
gone, and was too heavily wrapped to follow  
you up, though not a little disappointed  
at not seeing you and Mr. Tolson.

My address for the remainder of the fall and  
winter will be as above. My plants collected  
at Silver City have not arrived here and  
begin to be scarce they are lost.

Where shall I go to botanize next year?

Yours always,  
John H. R. Greene.

John H. R. Greene.

Prof. J. H. Gray.

strong feeling, the same

There is no much pleasure  
in collecting the good things  
there are to be seen in the world  
that have been left to us  
in our nature. I don't want  
to say much of that to you.  
I am in the line of natural  
history. I don't have any  
more to say for myself.

Yours truly

John G. Jones

Opelika, Alabama  
Oct 8 1886.

Dear Mr. Jones

Your production  
and the English translation are  
very fine. Thank you! But I don't  
yet get much better in the  
in the house. I don't want  
get up the 10th from the house  
one foot, as for the 10th of the  
house. It is an extremely  
modern house. I don't  
get a number of things to which  
I have some of the same  
in the house. I don't want  
to go to the house which  
I get here at Opelika to the  
I thought I had already seen  
the same in the house. I don't  
want to go to the house.





I would not be without its company  
down there next March and  
April, for much money.

Sincerely Yours  
Edw. L. Greene.

Grinnell, Colorado

Jan. 13, 1880.

Dear Mr. Watson:

I have been  
gathering lichens among these  
mountains of Southern Colorado  
for a couple of days past, all  
the while keeping my watch  
for winter relics of other plants;  
for I am intending to publish,  
as soon as practicable a Catalogue  
of the Plants of this State, and  
this portion of the state has been  
but imperfectly explored, botanically.  
Now see what I have found here:  
yesterday, to my amazement, a  
clump of mesquit bushes,  
(*Prosopis juliflora*) full thirty miles  
north of the southern boundary  
line; to day a Nolina — in Colorado!!



From the material enclosed can you determine the species?

The scapes lack six or eight inches of being as long as the leaves.

I suppose it is a dwarfed condition of your N. erumpens, but I wish to know what you find it to be.

The locality is in the mountains between the Sargatory and Apishipa rivers, north of Trinidad. The plant occurs plentifully, and does not hesitate to flower, and mature fruit in this latitude.

On my trip up the Rio Grande in the summer of 1872. I

marked the disappearance of the Nolina at a point just 400 miles south of this, at a much lower altitude.

Are you so perfect a master of the cabbage family that you can tell me the genus and species of which this other stick

represents? It is a plant quite new to me — a biennial (or possibly annual) three or four feet high, and grows among rocks, with the Nolina. If you send me a post card, about these things — especially the Nolina — to Albuquerque, New Mexico, you will do me great satisfaction. Some time when I am making up a mail package for Cambridge I will put in good leaf specimens of the Nolina, by which to identify the plant as from this surprising locality.

It is long since I had a letter from you, and I wonder what genus or order you may be at work on this winter, and when we may hope to see Contribution X?

No. IX goes with me on this trip to Arizona, and runs great risk of getting worn and soiled; but

Silver City Apr. 25, 1880

My Dear Mr. Gray:

Last week I made a little expedition to the Mogollon Mountains, some 75 miles distant, and I hasten to show you some of the things I picked up on the way, and while in the mountains; though in the mountains I saw too early to find much, but I will bring again after two weeks.

I was greatly surprised at the Mexican character of the shrubby vegetation just east of the Mohave river in New Mexico,

the *Graba* & *Erastrium* from the mountains I took to be new species, but Mr. H. A. S. may find

are under review.

Between you and I must get names  
as the species unnamed, and correct  
names for any which I may not  
be determined rightly. I want to  
be provided, in the fall, a catalogue  
of the Mexican plants. There are  
many that I like in the local  
at your use in case any of these  
have within among names when  
has to be discarded.

The volume of *Sarrimiana* came  
long & hard, but I have now  
no time to read it again until  
the plant harvest is past.

Many thanks for the book.

Of course I wanted it, as I have  
nothing that comes from  
your hand.

Yours truly

Edw. Lee Jones

(S. C. Jones) will be interested  
in the list on the same list  
and corner of the table to.

PLANTS OF NEW MEXICO.

*Asclepias, humilis, E. L. Greene*

Collected near Silver City, April 22, 1880.

By EDWARD LEE GREENE.

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June 18

Here is a collection

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Silver City, N. Mex.,  
June 24, 1881

Dear Prof Gray,

I am glad  
to hear the plants sent to  
Dr. Cocker are not lost.  
Dr. Engelmann, whom I urged  
to compare my little *Aechmea*,  
with the original *A. bracteostephan-*  
*-um*, has done so, and con-  
firms my view, suggesting, how-  
ever, that I change the name  
to *A. humilis*, for he says  
in Colorado's specimens it is sometimes  
4 inches high. Apparently  
all the "*A. bracteostephanum*"  
Colo. is identical with my  
plant. So now you must  
rehaul your bundle of milk-  
ands, and give *A. humilis* a  
name & a place! You have  
doubtless plenty of it in your hands.

Yesterday I got one specimen  
of what will be another new  
Asclepias, - near your *A.*  
*guttiguedulata* & *A. Conchoc*! -  
I sought carefully, over acres of  
ground, for more, but in vain.  
I am in hopes, however, that I  
shall find more in some.

I am looking now for a report  
on my last paper, meanwhile  
I have now material for another  
note on <sup>to</sup> *Centurus*, I think  
several new novelties.

Sincerely yours

E. L. Greene.

Silver City June 26. 1878

My Dear Prof. Gray: I have  
hastily tied up a small parcel  
which I am going to mail  
permitted. The plant I am  
most anxious for you to see  
is the number 113, about which  
I have been mistaken for these  
three years. I obtained it in  
1877, and it was one of the  
few things not lost, of that  
season's collecting in this region.  
The flowers are actually green  
and "yellowish" or "whitish" at first  
there, and with this fact  
before me the name Macdougalii  
viridiflora in the Bot. Mex. Bond  
caught my eye, and without  
carefully examining the plant  
I took it for that. Then last  
fall, without looking at it



again I sent specimens to  
correspondents with your letter  
name *Orosmodium* Thurberi.

I have this year collected &  
sent off some specimens under  
the same <sup>myself</sup> *penstemon* name.  
The discovery<sup>myself</sup> I have just made  
having just seen for the first  
time the real *Orosmodium*  
Thurberi & *M. viridiflora* of the  
Mex. Bound. Bot.

Examination shows my plant  
to be a *Lithospermum* and  
as it seems to me after looking  
through all the books & papers  
at hand, an undescribed species.

But I am unwilling to send  
out new tickets to replace the  
old and wrong ones, until I  
hear from you, but I should  
make a second blunder in the  
same plant. I think it may  
be found by you & belong to some  
Mexican & known species.

It is no rare plant as  
*Lobelia* Stuebeli. The two localities  
known to me are 28 miles apart,  
and the two plants grow together  
in both places.  
Of course I have never seen a  
specimen of your *Lactiflora*  
*quinguedentata* but according  
to your account of the word and  
form of that species this ~~5~~ <sup>5</sup> looked  
one new sent must be distinct  
from it.

Day after to-morrow I will  
start again for the glorious  
Hogollon Range! Hope I  
shall not be driven back this  
time.

Sincerely Yours  
Edw. L. Greene.

P.S. I was so greatly surprised  
to find *Pedicularis procera*  
here, & that at an altitude of less  
than 8000 feet that I sent you  
a specimen.

I have been stolen, and  
having been registered.

Dr. Gray told me, some time  
ago, that no copies  
were for sale now of Vol. II.  
I have sometimes thought I  
would advertise my want,  
in hope of thus finding some  
one willing to part with his,  
but I have not yet tried that  
expedient.

This is a long letter, of  
business, & nothing more.

As Ever Yours

Edw. L. Greene.

James Watson.

(Cambridge  
Mass.)

Silver City, New Mexico  
June 28. 1880.

Dear Mr. Watson:

I see by  
the Naturalist that the Vol. II.  
of Bot. Calif. will soon be  
out. That is excellent news,  
and now what can people  
do who must have a  
copy?

I believe of Vol. II there are  
no copies for gratuitous  
distribution, nevertheless  
a copy came to me, by  
mail, before the binding  
had been done, and was left  
with it.

If by any rich people's  
generosity I am to be  
thus favored <sup>with</sup> a copy of  
Vol. II, I beg to say, - and  
say it to my friends,

most likely to have knowledge  
upon this point - that  
to this remote & inaccessible  
corner, nothing of any value  
- not even a possible fragment  
of contributions - should be  
sent by mail unregistered.  
Moreover the wrapping should  
be done with great care  
using strong paper & tissue.  
If you could see the small  
packages emptied into one  
post office, after these 300  
units, on "back-board" you  
would perceive the importance  
of this suggestion.

Every post office along the line  
where mail is carried up,  
loses its store of valuables, from  
which - wrapping & names  
are gone - and a great deal  
of ink & paper waste,  
is carried off.

But good wrapping & registration  
- is insurance, to a fair extent.  
All this I take pains to suggest  
much considering the possibility  
of future things being sent  
by you as things have been  
sent safely in the past.

But if 200 copies of the particular  
Vol. in question are to be  
gratuitously distributed, do  
tell me when they will be  
placed for sale, if any are  
to be sold; or else yourself  
make one run a copy by  
buying it for me & sending  
it, with bill.

I know you can appreciate  
my anxiety to see the book,  
I shall never forgive myself  
for having, in the winter  
of 1876, sent my still undrawn  
Vol. by mail, to my book binder  
- upon which truth it is

Silver City, July 12, 1880

Dear Dr. Gray:

Your post-card  
of the 2d inst. asking about the  
*Phacelia*, has just come in.  
No: I did not feel sure that what  
I called *P. Arizonica* of this year's  
collecting was the same as the Arizona  
plant of 1877. But my specimens  
this year were too young, and, I have  
no specimen of the old plant  
to compare, so I can not help you  
at present. I would not wonder  
if two species are still included  
under the name *P. crenulata* - a  
low one, with large, showy blue  
flowers, and a tall one with small,  
blue corollas. But it is too late to  
make a study from live plants this  
year. I have, however, good bright  
flowering specimens of both and will  
send you some. There are also some

- or rather indications of any  
running together of these two  
forms, in this region.

Your report, dated July 1, on my  
parcel of plants contains some  
questions, to which I reply now.

The *Aspl. papilion* (115) is perennial &  
therefore *A. spinulosum*, covered  
for myself after I had sent it; though  
at the time of collecting, I thought it might  
be another species. An annual plant  
closely resembling this, is abundant, but  
will not be in flower for some time yet.  
This, I suppose will be the *A. gracilis* to  
which you have reference.

If I read correctly, a note at the end of  
your letter, it contains a name new  
to me i.e. *Sporella*. I puzzled  
myself over it a long time. Is it then  
true, that the little white-flowered  
*composita* which you at first took for  
a new *Mercuria*, you found to form a  
new genus? If so, it is news here,



and I shall look forward with great  
pleasure to the day when the description  
of *Guemella Arizona* will appear in  
print.

I fear to bother you with many questions,  
but I would like to know who is author  
of the name *Polygonatum vulgare*.

I dislike exceedingly to see, on a ticket, a  
name without the author's name, and for  
getting the ticket, in this case, lost.

I have no means at hand.

Again, Is Mr. Watson's name on the  
ticket, the one that is to go with the  
specimens? On the one in the "Pond"?  
My dearest new *Asclepiad* (I seem to  
overrate me a month so far this year)  
is a marvel! Suggesting by its  
habit both *Anantheris* & *Asclepiodora*, it  
has its another wings evident in the middle  
like *Acerules*, but by its conspicuous  
form it will easily break itself in to  
*Asclepias*, and hang there for ever; though  
it comes under none of your three  
sections! I enclose a flower;

and, in case I do not find more  
than the single specimen which  
I have, will give that to you  
when it gets dry, as also the  
one specimen of plant of 4. 5.

of which number, I found some weeks  
ago another specimen with good, mature  
follicles.

Very Sincerely Yours  
Edw. S. Greene.

to day, and include in it these,  
two (with kinds of which you have  
seen, thus far, only the flowers,  
(As ever yours.

P. L. Greene

P. S. The *Asclepias* above referred to, which  
I had not seen till yesterday, proves to  
be *A. brachystephana*! which I really  
never did see before. It is  
accurately described in the Bot.  
Mex. Bound; and, I fancy that  
in the character given in the Syn-  
thel. is traceable the influence of  
those specimens of *A. humilis* which  
were mixed with it. E. G. G.

Silver City. July 16. 1880

Dear Dr. Gray:

I noted down  
the character of my *Asclepias*  
*mirabilis*, and even mailed my  
manuscript to Mr. Coulter (whom  
I requested to show it to you, before  
printing; he being near your house)  
without having looked at your  
description of *A. mycelaginifolia*.  
You see, the rather wings of my  
new plant put me off the track;  
so that I never thought of looking  
for its near relative in your list.

1. Yesterday, while studying up  
a species which I had not seen  
before. I read, incidentally, your  
character of *A. mycelaginifolia*,  
and, at first, badly scared, fearing  
that my supposed new

solid buds, might be the same.

But the two must be entirely distinct, after all, though very closely allied, notwithstanding the difference in author names.

I had to sit down and write a correction for a note about it which I had appended to the description.

I would also have altered the name, but I could not think of anything.

Under the supposition that there was no Asclepias in India with such

a marvellous combination of characters, I called it A. mirabilis; but in view of A. mycelaginifolia, it is not such a wonderful plant

as I thought. But, inasmuch as it will, apparently, stand next to A. mycelaginifolia, there seems to be at least a poetic fitness in the name mirabilis.

For your once arrangement of the genus in Proc. Am. Ac. XII & in

Syn. Fl., this is an unfortunate discovery; and if the habit of A. mycelaginifolia is so similar,

Asclepias in general, as that of this plant is, perhaps the difficulty can be gotten over by separating them from the genus:

though I suppose that, however peculiar the buds may be, the presence of horns will be deemed a sufficient reason for retaining them in Asclepias. At all

events, I am very anxious to hear what you think; and if you deem it wise to cancel all I have written for the Gazette about it, from the volume, 13<sup>th</sup>, & note, I shall not feel sorry. I told Mr. Coulter to have your name at your discretion.

It is getting too near Sunday, and the season is not to be put off longer, so I would make up a postscript



to see re-writing. You will have  
seen before now, and I trust  
will have duly corrected the  
second & augmented M. S. on the  
asclepiads.

As to the A. S. dentata business: it  
was the following passage in your  
character of the species which con-  
vinced me beyond doubt that mine  
was a different species: "hoods + + con-  
-duplicate, somewhat quadrate in  
outline, the keeled back," &c  
Now that "keeled-back" & "quad-  
-rate outline" creeps to my  
<sup>the idea of</sup> mind, a novel aspect as different  
from that in my plant as can  
be imagined. In the affair of  
horn & teeth I should have suspected  
nothing at most but a variation, if that  
had been the main difference.

E. L. G.

Silver City Aug 3. 1880

Dear Dr. Gray:

The coming  
of the rainy season, with the  
consequent abundant-blossoming  
has kept me from correspondence  
for the last three weeks; but  
now I have taken time to tie  
up those milk casks and a  
few other things which I will  
mail herewith.

No 188 is that Lithospermum of  
which I sent fragments a year  
ago, and which you called L.  
canescens. By these specimens  
you will perceive the vast difference  
in habit - that rosulate tuft of  
root leaves! - The flowers are  
hardly yellow - but cream colored  
when fresh, and delightfully  
fragrant, with the odor of  
Oenothera biennis, but stronger.



I have no specimens of *L. Canaan*,  
with which to compare the flowers,  
but from the description I judge  
there is some difference. The leaves  
have some stinging hairs, but I  
have not yet had time to examine  
them closely; the stings I have felt.

The *Pentstemon* (no. 185) does not  
seem to be *P. secundiflorus* nor any  
other described species, yet, at a  
little distance it looks so exactly like  
*secundiflorus* that I don't always  
think it is not that. But the leaves  
are different in form, more  
numerous & the whole plant is  
fruticulent.

No 202, *Solidago* is apparently the  
same as what I sent from Colorado  
three years ago, and which you did  
not seem able to name very positively.  
If I mistake not you wrote me about  
a year ago that you were then at  
work on this genus, so I try the

species again for a name.  
The *Hymenopappus* (187) is far  
from answering to any of the  
descriptions in my books, & is  
unknown, a high mountain;  
so I presume it is new.

We have had no mail from the east  
for twelve days; floods are the  
reported cause of the delay; &  
a part of what is due, is reported  
to have floated down the Rio  
Grande! I hope nothing of yours  
sailing has gone that way.

Adieu Yours

Edw. L. Greene.

P.S. Since I wrote the above, a  
few packages of our long delayed eastern  
mail have come in, and my  
notes, with your kind appendix,  
from Mr. Coulter. I send them  
back again, though not with much  
hope of their reaching you in time.

have told us that any of  
these plants have corollas  
decidedly ~~irregular~~ irregular as this  
one certainly has, moreover  
when its stamens are put  
upon filaments long enough  
they are declined, as I  
have observed in hundreds of  
the fresh flowers. It is very  
common here & can not  
be new.

If you will be long in Europe  
how shall I direct to you  
any ~~other~~ flowers of other  
possible new asclepiads?  
I have no time to re-write &  
correct those notes for the  
Gazette; but least from a week  
to come; but perhaps by a very  
free use of your own pen in  
simply erasing; and putting  
in now & then the right word  
e. g. ~~"Wrightii"~~ "Wrightii" instead of "mirabilis"  
the thing will come in print all right.

E. L. G. As En. a while. For me a while. otherwise, the m. s. must wait

Silver City Aug. 13. 1880

Dear Dr. Gray:

Your letter of  
the 3<sup>d</sup> has just come.  
I hope you have taken me at  
my word. (for I always mean  
all that I say) and done with  
that manuscript just what  
you thought best. If you  
have received it until now  
all right; but then, instead  
of waiting to hear from me  
you might have erased -  
for example the "mirabilis"  
& put down the better Wrightii  
as the name for the asclepias -  
as I instructed Mr. Coulter  
to let you do.

I have found, since I last wrote  
to you, a second specimen of  
the plant, twice as large as the

first (which I send you) with  
flowers rather larger, & in this  
one the anthers seem to  
have their widest place quite  
a good deal below the middle.  
Many thanks for the two flowers  
of A. longicornis. It does not  
seem to me so great a  
wonder that you confounded  
the two, for these flowers  
of longicornis look more like  
those of our Wrightii than I  
supposed they would.

And now, here is another.  
It can't be A. glaucescens H.B.K.,  
(though the stem & foliage answer  
perfectly to your description  
of that species), for the heads  
are, at summit, truncate & cross  
not "2-lobed"; moreover, the corolla  
is not reflexed! It is so  
glaucous that I would call it  
A. glauca, but for the existence

of the A. glaucescens; so I know  
not what to do but call it rupestris  
for it grows on the rockiest  
slopes, near the summits of the  
Picos Altos Mountains.  
Certainly closely allied to A. glaucescens  
I fear that, by some possible error  
of description, or some defect  
in the original specimens, this  
may, after all, be that species;  
but you can tell, after examining  
the flowers, if I am wrong.  
I have now some plants which  
I want to send you, ~~when~~ there is  
no time to pick them out;  
for the rains have been abun-  
dant - and there is botanizing  
every where, & specimens are  
to be made, of a hundred things,  
I never saw before; but I will  
ask you now what this Collomia  
is. I can never tell from  
the looks, because none of you



Silver City. Aug. 13. 1880

Since mailing my letter } this date I  
have thought of a new expedient in the  
matter of two of those asclepiads, since I  
have no time to re-write & correct, say  
for drop from that Gazette M.S. my  
"A. Neo-Mexicana" & "A. mirabilis", and  
all I have said about them; & you name  
& describe them as you like, in your  
forth coming paper. That strikes me  
as decidedly the best thing, under all  
the circumstances, now so as you like! E. L. G.



WRITE THE ADDRESS ON THIS SIDE—THE MESSAGE ON THE OTHER

*Prof. A. Gray*  
*Cambridge*  
*Mass.*

A circular postmark from Cambridge, Mass., dated AUG 15. The text "CAMBRIDGE MASS" is around the perimeter, and "AUG 15" is in the center.



& exceed 400 species & my this  
years collecting.

I want to get a copy of Benth  
& Hook. Herbar., and I must.  
I guess look to you for directing  
about how to obtain it.

My specimen of the latest Asclepias  
(of which I sent a flower) is now  
dry, but I doubt if I shall get  
it mailed to you in time for you  
to see it before you go; much parish  
work lately; occupied all this week  
in jail with two poor young  
convicts whom I must attend  
to the scaffold this afternoon;  
No; there is no mistake about  
the whiteness of flowers, (says) of  
Gracella; none are whiter.

The stems of Asclepias Wrightii  
are decumbent - almost prostrate.  
Maybe the rest of the group are so.  
But all this I am writing will come  
too late.

Sincerely yours

P. L. Greene.

Silver City, Aug. 20, 1880.

Dear Dr. Gray:

Your letter of the  
11<sup>th</sup> inst. just in, gratifies  
me much, because it shows  
that you have exercised, with  
my Asclepias M.S.S., the freedom  
which I wished. There will  
of course, be no need of anything  
at all going into the Gazette  
about them & the M.S.S. is only  
to be destroyed; and I hope you  
will have done the same with  
the other list, or other new species,  
which I found that; for the  
Proc. Am. Acad. is a better place  
no doubt, for a new species to  
be published in.

In making one call that  
milkweed A. Wrightii, I  
think you go to an unnecessary

extreme in courtesy to your  
discipulus. By saying, in  
your paper that I had drawn  
attention to the species as distinct  
from A. longicorne, you would  
have done me ample justice; or  
if you wished to do more you  
could have named it Grueneri.  
That was what Dr. Engelmann pro-  
posed to do with the little one  
after it had been printed in the  
Gazette. And by the way, I will  
quote to you his words, by which  
I was induced to propose the alteration.  
" 'unialis' it is not, and you  
have time yet to alter it, for  
which I would suggest A. humilis,  
if you will not let me call it  
A. Grueneri."

When I had found specimens even  
than an inch high, I still would  
not have thought to alter the name  
but for that very strong proposal

of the Doctor's: and, since you  
say you will not alter it, all  
right. I had sent to correspon-  
dents who had received the species  
from me, new tickets with the  
name A. humilis, as soon as I  
had mailed my second list of M.S.B.  
& Mr. Coulter. Now, I will  
recall those and and again  
the name A. unialis.  
I have sent out four or five fascicles  
of 100 species, but that is the  
only one of the new mildreds  
which was in.  
By the way, I shall have, there or  
four more sets than are spoken  
for, so that you can, if you wish,  
refer to me, any European naturalist  
whom you may meet with on  
<sup>who may desire what I am getting.</sup>  
your tour, I suppose a good  
many of the things I am collecting  
will be wanted at Kew, but how  
can I tell how many, or what-  
species? But there will not be

Silver City, New Mexico  
Aug. 21. 1880

My Dear Prof. Gray: This morning's  
mail brought me yours of the 12<sup>th</sup>  
inst. I fear I grow to be  
a grand nuisance almost, &  
will, in the future, try to mend  
my ways. But I thought that  
the latest parcel would reach  
you as soon as the latest M. S.  
reached Mr. Coulter; but it must  
have been delayed.  
As to Graba Megalotricha, if the  
specimen I sent you does not  
show the dead scape of last year  
still adhering to the root, &  
thus proving the plant perennial,  
it is not like most of my  
specimens, & I will send you  
another which does show that  
that thing.



I think after all I wrote to both  
you & Mr. Coulter, you could  
have done what you pleased  
every way with my novelties -  
publishing any of them e.g.  
*Lithospermum aride*, as you were  
making up a paper for the press.  
But I was waiting for you to  
see good specimens of *L. Coleridgei*,  
and intending to print the two  
together.

Your suggestion that I wait  
till the end of the season & then  
with Mr. Watson's help publish  
all in one batch, shall be my  
law, in the matter, & I trust  
Mr. Coulter will readily have  
agreed to it. I do not know  
just when to address him at  
this date, but trust it will  
be done as you wish. I will  
have him return to me all

the sheets I have sent.  
I shall see if you furthering  
paper if you printed the *Notogadus*  
*lynni*, as I always expected you  
to do. It is too hard a genus for  
me to muddle with. I have another  
beautiful n. sp. thereof, collected  
in fl. only, on the same day on which  
I got the others; & I was then  
confident of being able to visit the  
Mogollons again in time to get its  
print; but now it will have to wait  
until next year.

As ever yours  
Edw. L. Greene.

and of those strange, opposing  
San Francisco mountains. The trees  
are all different from all  
that grow on this side of the  
S. F. River, & some of them are  
not in the list of N. Am. trees at all.

I shall go again a week hence,  
if the Apaches will let me, to bring  
a load of wood to send to Brookline.  
But alas, the Indians are upon  
us again, worse than ever, within  
the last week. On the very stage  
which brought your latest letter  
driver and passengers were all  
killed, & the mail pouches were  
cut open & their contents scatter-  
ed over the ground; whence they  
were gathered up & forwarded, by  
the military who came upon  
the scene & late to save life.  
I am wondering how, with you in  
Europe, I shall manage to get  
names for the world of species  
of compositae I am gathering in

Silver City, New Mexico  
Sept. 10. 1880.

My Dear Dr. Gray:  
Two letters &  
the proof sheets of some very interesting  
pages, have been received from you  
within a few days, for all of which  
receive my thanks.

I have lately had the happiness of  
a trip to the San Francisco Mts,  
some 125 miles west of here,  
within the borders of Arizona, &  
I hasten to send to you a  
fragment of what you will agree  
with me, is the most interesting  
discovery I have ever made, i.e.  
a new, strongly marked species  
of your genus Gundlacheria, so  
very different from the original  
that it calls for large alteration  
in the generic character, yet



I feel quite confident you will not find it worthy of being made the type of a new genus. I submit it to you, with the name which has suggested itself, & you must write me, if you have any objection to my publishing it with what is now getting to be a fine long list of <sup>my</sup> novelties of this season.

By the flower of Asclepias glaucescens which you have kindly sent, I perceive that my plant of which I sent you one flower is wholly the same. But, in view of the flowers in both mine & yours, the following passage in the Ag. Fl. is sadly misleading. "crest & 2-lobed at summit, the outer lobe broad & rounded." It is squarely truncate & crenulate or crose chevroned. Well; from the San Francisco Mt. I guess I have another Asclepias

that is new: though all my specimens are in fruit only. A branching shrub two feet high, with evergreen foliage; i.e. each year's set of leaves persisting for eighteen months, just like those of Pinus ponderosa in that respect. There are undecid-  
-ifol & withered flower bud. I was enabled to settle well the question which at first arose in my mind as to what genus this handsome piney-looking bush would fall into. I have nice large specimens & will distribute them, though they be in fruit only, and I think fruticosa is the best name; or, is this thing known from old Mexico, or some other place, before? I wait for your answer.

I do not think I have brought less than a dozen new species

Sept 10, '80  
this month. Of course

Mr. Watson can help  
greatly, & for the rest, we  
must, of course, wait,

You have carefully answered my  
question about the volumes of the  
Genera Plantarum.

Nor, if you can send me the  
books, & take your pay out of  
the money you get from  
Dr. Casson, do that.

I have kept in mind your  
suggestion, made last winter,  
about naming nice things for  
the Kew herbarium. There  
will be a set of about 400  
species of my this year's gath-  
ering, for that. Wishing to do  
no more than I could do well,  
I have made only ten sets for  
distribution this season, & now  
with the two additional ones  
which you have lately assumed for

Journal, in Europe, the list of  
subscriptions is full; &  
Dr. Vasey's application for a set;  
which came today, will have to be  
denied.

I shall send the set for New, &  
the Smithsonian as you direct, as  
early in the season as possible,  
perhaps within six weeks from  
this date.

I shall bother you with a long  
letter; so farewell.

Sincerely Yours

Edw. L. Greene

Dr. Asa Gray.

I have even to day brought in,  
from Pinos Altos Mts. beside  
Rothrock's Microstylis montana,  
two more orchids, one a Habenaria,  
(H. brevifolia, n. sp.) very strongly  
marked, & another ~~which~~ of  
a genus not known to me,  
having the habit of Microstylis  
& flowers of Liparis!

When can a letter be sent with  
fragments of some more new  
things? Or, do I trouble you  
by interfering, or rather, interrupting  
other possible studies you may  
have in hand?

As ever yours

S. L. Griseb.

Silver City, New Mexico.  
17. Sept. 1880.

Dear Dr. Gray:

In the genus  
Polemonium I prefer your  
counsel, and so I send some  
fragments of what is manifestly  
a good new species, hoping  
that my letter will catch you  
at Kew.

The plant has wholly the habit  
of P. foliosissimum, though it is  
much larger; but it is quite as  
leafy, yet has none of the strong  
skunky odor, nor any viscid  
pubescence, except about the  
flowers. Indeed the herbage is  
smooth & scentless, & the flowers  
very pleasantly fragrant like  
some Phlox.

The plants were nearly past-



flowering when discovered,  
so that the large specimens  
which I shall distribute show  
only the habit of the species  
& its fruit. But from  
lower & lateral branches, I gathered  
enough small bunches of flowers  
to go with the fruits.

The flower you see on well-  
marked. The pointed corolla  
lobes do not expand at all  
beyond the truly campanulate,  
so that I had a mind to call  
it P. campanulatum, but since  
a number of species have been  
named from the color of flowers,  
and since this has a marked  
color of its own (yellow, with  
tawny red outside), I prefer  
the name P. fulvum.

Do you like that? Any way,  
I guess I will distribute, to  
my American correspondents

under that name. The tickets  
can be recalled, in case we  
can think of a possibly newer,  
or better name under which  
to publish the species.

I am delighted with the paper  
on Compositae, which has just  
come to hand. But there will  
be, I trust, many new compositae  
to add, before the patiently longed-for  
volume gets us. I have now a  
Bigelovia, an Asteriscia, two Brickellias,  
two Eupatoriums & a Baccharis, new  
that I feel very sure of; & what  
else there may be in 20 or 20  
plants which I have not yet  
got traced to their genera, I can  
not, of course, say.

The Wrights, Bigelows & others  
can not have penetrated to these  
mountains when I was finding  
now, so rich a harvest of fine  
novelties.



I drew forth my bundle of specimens, and made a second careful examination of the flower & fruit. I am now fully, thoroughly confirmed in the opinion which I at first formed. The stamens are certainly those of Whipplea, the 5-portedness of the flowers & the one seededness of the cells are also Whipplean. But, as it appears to me calyx, capsule, & the seed, when you come to it, are all, wholly those of Gundlucha.

The inflorescence is centrifugal as is that of Etropiicola whenever, as often happens, several flowers grow together; while that of Whipplea is centripetal.

W. modesta is hardly more than an herb, its weak stems reclining, and having soft membranous leaves. Etropiicola is a hard, rigid bush with a peculiar habit of growth, coriaceous leaves &c., & in this

Silver City, New Mexico  
Sept. 28. 1880

Dear Mr. Watson:

I mail herewith a parcel of plants for the herbarium, some of which will, I suppose, give you work. Those which I either know or guess to be undescribed. I have indicated names for. Dr. Gray told me to make an article on any new species & have it printed at the end of the season. But, from any not very complete means I can not always be sure, and must beg you to correct me in any instances wherein I have newly named a plant which you find to be already described. And I enclose herewith, blank tickets which you can fill out

in case you need to destroy any  
which I have made up wrongly.  
Here are some notes, on some  
of the specimens.

235. Remarkable among Brickellias  
for its plumose pappus = B. brachyphylla Gr.

393. I do not feel sure that this  
is B. Wirligii = B. ulonicae Gr.

370. Does not look like Californian  
B. Californica; or I begin to  
think that + B. Wrightii + may  
be more of these. are all one.

But if you are of a different mind,  
what is this? The stems are  
herbaceous to the ground = B. floribunda Gr.

377. This may be Microstylis montana,  
but I guess not. I send you  
my largest + my smallest specimen.

398. More of a puzzle than the  
above; with apparently Liparis flowers  
+ Microstylis habit. Sorry I  
did not take care to get the roots,  
for I saw no more, but this one  
I fetch of these little orchids in

now, do not have <sup>it</sup> ~~them~~ to me  
to publish. Take them on hand  
yourself. I have no facilities for  
getting at their characters.

291. Familiar as I am with the  
typical species of both Whipploea  
and Gendlera, and knowing  
that you had published a second  
Whipploea from Utah, I exclaimed  
to myself, the moment I saw  
this thing, notwithstanding its 5-merous  
flowers "A second Gendlera at last!"  
I never thought of ever comparing  
it with your description of W.  
utahensis; but mailed some of it  
in a letter to Dr. Gray, under the  
name - Gendlera cymosa.

Writing to Dr. Parry about the same time  
I enclosed a fragment to him.  
He wrote back, "I recognize in your  
Gendlera cymosa the Whipploea  
Utahensis of Watson."

As soon as I had recovered some  
what from my fit of mortification

314. Allied to B. Bigelovii, but  
more slender, whole leaflets,  
& the akenes pubescent.

= Biplaris Bigelovii.

This must be enough for now;  
but there are many more new  
or doubtful things to follow by  
and by.

Sincerely Yours

Edw. L. Greene

very marked habit of its own,  
the doubt in question wholly  
agrees with it.

I wonder if you reached your  
conclusion from imperfect  
material? So I said, in a  
recent letter to Dr. Gray, "If you  
& Mr. Watson will let me, I will  
distribute my specimens as  
Gendlera Utahensis; if you will  
not, I shall submit to authority,  
but not in faith."

3400. I suppose, the same in reality as  
the Colorado one, but the fruits of  
this are larger, mellow & palatable;  
those of the Col. bush as small, hard  
& dry. A variety <sup>of the same form</sup> in these mountains.

30. Of Smilacina sessilifolia you have  
the berries "blue-black". I find  
them crimson & the species is  
thereby confirmed & strengthened!

248. You may find this to be only  
A. scaposum; but I can not



find anything to call reticulation  
in the bulb coats & it seems to be  
rather decidedly rhizomatous.

The propagation by offshoots ending in  
a bulb is, I suppose something  
uncommon, if not unprecedented  
in the genus. If it is as I  
suppose, a good new species, &  
you have this fall, as several  
other new *Ellia* to publish, put  
this in with them.

324. *Engelmannia* *P. lanceolata*  
is described as having winged  
sepals: but this thing per-  
plexes, by having no sepals, but  
a scarious rim surrounding  
the upper part of the capsule!  
The plant is wholly erect: flowers  
not seen expanded; withered  
corollas very deep orange color. = *P. lanceolata*

217. Peduncles & terete leaves  
all lying flat on the ground.  
Their seeming otherwise in the  
dried specimen is owing to

the immortal plant having been  
held by its roots with the tops in  
boiling water, until they collapsed  
& could not be replaced in their  
natural position. Flowers pale  
yellow. Evidently rare: only about  
ten plants seen. = *Talinum humile*.

313. I have lost my copy of your  
monograph of the genus, &  
have you to determine what my  
plants are; but this from the  
Francisco Mts, seems a well  
marked new one, between *E.*  
*Shortianum* & *E. pharnacoides*.

377. I have mailed flowers & fruits  
of this, in a letter to Dr Gray.  
I suppose it is unquestionably  
a good species, most related to  
*P. foliosissimum*; very large,  
often more than 3 feet high!  
Corollas not expanding beyond the  
truly campanulate, yet measuring  
an inch across, in the living  
specimen. *P. flavum*

I believe I neglected to put into  
the parcel, a specimen of the  
Riddellia which I take to be  
a new species, so I will put a  
head of flowers in the letter,

It differs from the other members  
of the genus known to me in  
not being corymbose.

All the plant is diffusely branched,  
& the heads all borne singly, at  
the ends of these long peduncles.

None of my correspondents who  
have received specimens agree  
with me in referring your  
Whipplea stahensis to Fendlera.

My familiar acquaintance  
with the two genera, and  
their great difference in  
habit & general aspect, may  
have too strongly predisposed  
me to refer this thing to  
Fendlera on ground of habit.

Silver City, N.M.,  
Nov. 25, 1880.

Dear Mr. Watson:

Here are notes  
on some more of my most  
interesting plants, of which  
specimens are mailed herewith.

No 306. Ipomoea. You may,  
upon comparing, find this  
to be Dr. Gray's I. barbatiopola.  
But the pellucid spots on the  
leaves, & the spur-like pro-  
tuberances on the petioles are  
points which I can not think  
could have been left unmen-  
tioned. The flowers too, are  
more than an inch long,  
rather than "lvs."

No 198. Echinospium ~~pinetorum~~.

Though enough like floribundum



in habit, its fruits are  
different, answering well  
enough, however, to those of  
E. deflexum, which, again  
it can not be; still, it may  
not do to publish it as <sup>a species</sup> ~~new~~.  
What think you?

207. E. ursinum; very  
way so strongly marked, I  
suppose there can be no  
doubt about its being a species.

222. I at first thought would  
be Senecio Parryi, but  
Dr. Parry says it is not.

361. As to its seeds it answers  
to the description of neither  
N. hispidum nor N. densissimum,  
yet, I suppose it must be  
referable to one or the other,  
but which??

408 Annual, & therefore distinct  
from G. multiflorum but  
what is it to be called?

445. — A comparison  
may show it to be Dr. Gray's  
B. baccharidea.

213 + 446. These two species  
are sufficiently distinct; but  
I am not sure that I will  
be able to make out the  
differences, unless I take  
up points which Dr. Gray  
has not taken into account  
at all, in his work on the  
genus. I strongly suspect that  
the seeds have characters that  
may be turned to good account  
in distinguishing species.

380. I have not seen  
authentic B. Fendleri, which  
has "achenes glaberrimis".  
The pubescent ones in this & also  
its woolly ciliate scales lead me  
to think it is an undescribed  
species. You must compare  
it with B. Fendleri, however.

Still, having the habit of growth  
out of question, I doubt  
very much if the characters  
of 5-nerved flowers & subulate  
filaments, weigh more than  
those of the peculiarities of  
calyx, capsule & seed, in  
this case, all of which latter  
are *Gundlacheri*, as it appears  
to me, in the shoot in question.  
The only hint toward a  
confirmation of my view  
comes from Dr. Gray, but it  
is given under circumstan-  
ces which reduce its value,  
and make his words rather  
amusing than instructive.  
Before I had ever thought  
of its being the plant you  
had described, I sent him  
a small specimen labeled,  
"*Gundlacheria cymosa*, n. sp.", and,  
knowing his habit of making  
every new and then a new

unmistakable genus, in this  
order I said. "I trust  
you will not deem it necessary  
to separate it generically from  
Fendlera on account of its  
5-nerved flowers, and its  
subulate filaments."

Apparently he did not recognize  
it as anything he had ever  
seen before, for he simply  
says, "Your Fendlera cynosa  
looks new to me, and of  
that genus!"

I am wondering what you  
will say to my long, but  
I fear disconnected argument.  
I hope you are soon back in  
Cambridge. You are greatly  
missed!

Sincerely Yours,

P.S.

Edw. L. Greene.

I have just sent off to the Bot. Gaz. the  
char? of 1 Delphinium, 1 Draba, 1 Ribes  
+ 2 Lithospermum, of all of which there  
are specimens in your big herbar there.

Silver City, New Mex., Dec. 28, 1880

My Dear Mr. Watson:

I have already three letters ahead of this, awaiting your return to Cambridge. The first of the three was sent before I had heard of your absence. I hope you will find that, & reply to it; I am more anxious than ever to know if by any means I can secure a copy of Bot. Cal. Vol. II. I have also sent two packages, ("registered") of specimens, addressed to you, which still lie in your post-office. No body agrees with me in my transferring your Whipplea Utahensis to Gundlra, and somebody lately writes, "Mr. W. will soon be back in Cambridge and then, look out for thunder". But I am not anticipating very heavy thunder, inasmuch as my opinion in the case is not published nor intended to be (without the consent of better botanical authority than I yet have got), except as it is published on my tickets. I did that, to assert my opinion before those who are my correspondents and draw attention to what I sincerely think are the true relations of the shrub in question.

Dr. Gray, to whom I sent a specimen while as yet I took it for a positively new species, and who, as I feared might make it the type of a new genus, on account of the 5-merous flowers, & subulate filaments, (which points I called his attention to, as being at variance with Gundlra as it stands) writes back from New: "Your Gundlra cymosa, looks new to me, & of that genus," at which remark, I am now, more amused than instructed.

Sincerely Yours, Edw. L. Greene.



Silver City, New Mex. Dec. 22, 1880.

Dear Mr. Watson:

I shall bother you, no doubt, with too many letters; but I wanted to say 1<sup>st</sup>; that that Riddellia of which I put flowers in a letter, & which I at that time took for a new species, I find now to have been described. Only a day or two since did I stumble upon the description of R. Cooperi, which I had forgotten all about.

2<sup>d</sup> That Portulaca scutellata of mine I have been looking at, & considering again. With its gamosepalous calyx; the scarious rim-like top being persistent, ~~which~~ it is very unusual in Portulaca, but not less so in the Croton. But I suppose one must not found a genus on the plant, at least until the flowers have been seen. <sup>Very</sup> Res. ever yours

C. L. Greene.



watch it for flowers & fruit  
next season, very carefully.

I made specimens (August-) of  
what there was the remaining, but  
obtained no trace of fruit even; the  
scapes, bearing still the vacant-  
involucres & receptacles, were very  
much decayed. But these &  
the habit of the plant seem to tell  
distinctly what its affinities are.  
I have been this winter making  
enquiries after a complete copy of  
De Candolle's *Prodromus*. One firm  
in N. Y. will obtain it for me for  
\$95.00, one in Boston for \$87.00.  
Do you think I can do better than  
to take it of the Boston man?

He means, the whole thing, all recent  
additions; which of course I want.

But I do not understand why two firms  
should make such difference in price  
for precisely the same volumes.

Sincerely Yours, Pdw. L. Greene.

Silver City, N. Mex.,  
Dec. 24, 1880

My Dear Dr. Gray:

Probably two  
packages, of 100 species each,  
of my this year's gatherings  
which, by this time reached New.  
If, by any chance, only any one's  
forthright, they are not segregated  
to their 200 places in the  
great herbarium before your  
return to that place. I hope you  
will look them over, and have  
some thing to tell me about some  
of them.

You will not be likely to see the  
third fascicle until towards spring.  
I have names for many of my  
plants still; do not like to send  
specimens, even to New, without  
names, & so I wait for Mr. Watson

P.S. I have the General Plantation almost; I shall soon send  
to Prof. Gröndle Mr. Casan's set of my plants.

& get back to Cambridge  
to help me out.

You have often asked me for  
seeds of Gundlira supericola which  
should I infer is not yet in  
cultivation. I enclose a few  
seeds herewith, to be planted at  
Kew if they are wanted.

I am waiting in anticipation  
of some "thunder" from Mr.  
Watson, about my proposed  
transfer of his Whipplea latifolia  
& ~~Whipplea~~ Gundlira.

The only word I have yet received  
from you, is hardly instructive.  
It was upon the receipt of the  
first fragments which I enclosed  
to you, & which I had ticketed  
for a new species (as I then deemed it)  
that you wrote "Your Gundlira  
cymosa looks new to me, & of  
that genus;" which remark

shows that you did not  
recognize Mr. Watson's lutea  
plant in my fragments.  
Then an people in America who  
complain that Grenella is not  
a good enough genus for the man!  
But I am well satisfied with  
it. The white rays & absence  
of gums on the herbage. I  
am very confident will keep  
it clear of falling into  
Leuthoccephalum. But I  
suspect I have now (or will  
have when I get flowers & fruit)  
a better new genus of Senecionideae.  
unless the thing prove to be a  
Homogyne (!) The leaves (all radical)  
are renunciate pinnatifid, and the  
<sup>monocephalus</sup> scapes only 2-3 in. high; flowers  
evidently appearing long before the  
leaves. It grows on the tops of our  
very highest mountains. I shall

Silver City, N. Mex. Jan. 4, 1881.

Dear Dr. Gray:

It is most refreshing to me, after so long a time of dearth, another specimen of your chirography! The letter of Dec. 10. is just in.

I hope that before now you will have seen the second century of my plants; the third which may not reach you before spring, will be the richest of all by far, in what I take to be new & rare plants. There are duplicates remaining of about 100 species of my Yuma plants, including many of the new species. When I can get where they are I will shall have the best possible selection from them.

I do not think I have answered you concerning that parcel of plants from Beck. Please send them to Cambridge whenever it is most convenient. There is no need of haste.

Your note on the two Echinospenna is hard to accept; but with you at New, my faith is good. I did think the "E. coccineum," with its hispid hairiness, & multicellular all over, & the very tips of the prickles, was wholly & clearly distinct from all our others; & I cannot see how species are made in that genus, if that & the Colo. E. floribundum are one! The other which I called E. punctatum looks more like the Colo. plant, but its multicellular are as different as need be!

But of course, they must abide by your decision.

You need not fear, after all the scoldings which I am so happy as to possess in your hand writing, that I shall print n. sp. without obtaining your approval first!



My Gradiocaulis Neo-Mexicana, certainly in  
that first parcel, according to my list, you do  
not at all mention. It is not rare; must  
have been collected before; & if collected without roots  
would unquestionably have been put into J. Virginica.  
But the long, horizontal, jointed stems, bearing  
oblong yellow tubers at its joints will establish  
the species. The flowers are still unexamined by me.  
It is so long since I have seen Bigelovia Douglasii—  
that I may have forgotten how it looks; but I  
guess I never should have discovered my error  
in referring to that Gymnosperma, had you  
not mentioned it! I never thought of looking  
at floral characters.

Bigelovia juncea has a few linear-filiform  
leaves an inch long, but they are dead & fallen  
before the plant flowers, so that I have never  
seen them fresh.

I do not find any presumably new Bigelovia from  
the S. Francisco Mts. on the list of century no 2,  
though I meant to put it in; so I enclose a  
fragment in this letter; good spec. to follow by  
& by.

If that Asclepias is really A. Linaria, we have another  
most striking instance of an utterly worthless & worse  
than worthless description in the Proceramus.

It is described with "encellis dorso ovato processu acuto  
brevis incluso gymostegium sessilem aequantibus."  
but the leaves of mine are oblong spatulate and more

than twice as long as the anthers; & the horn  
is not "acute" but blunt, and it is exerted  
rather than included; moreover the "gynostegium"  
is far from "sessile". I notice also in mine  
that the anther wings are, for the size of the flowers  
of remarkable breadth & are notched at base.

I found the plant in a second season of bloom  
on Nov. 1. and here I give you a couple of  
flowers, which I hope you will deem it worth  
while to soak out & compare with some  
of authentic A. Girardinii.

As for that "Graphalium strictum" I know not  
how I came by that name for that plant.

I have four distinct Graphalium, here, & no  
names but for one of them.

In the second fascicle you will find a  
Phoradendrum indicated as new, which I  
now see, is George's P. paniculatum. I overlooked  
the Bot. Whipple Ex. in my hunt for a description  
of it.

I also apprehend that at Rio, <sup>possibly</sup> may be found,  
from Old Mexico, with probably a name, the  
Cupressus of the same parcel, which I have  
called C. Arizonica, & which Dr. Engelman  
also thinks will be new.

You must notice the peculiar (compensate)  
shape of the corollas of my Polemonium flavum  
before you tell me for sure, that it is not a  
new sp. I know nothing at all approaching it in that



particular. The great size of the flower is  
also something; not to speak of the reddish yellow  
color.

I hope I shall yet receive letters during your  
winter's sojourn in that great place.

Mr. Watson is not yet heard from about  
anything; not yet home I apprehend.

Will you ever forgive the inordinate length  
of this epistle?

Sincerely yours.

Edw. L. Greene.

*Polypodium a. rufostriatum*  
is near *B. cuneatis* of  
Griset & - which  
grows in same way,  
leaves very small.  
Inoculum + nr. of fls.  
Drift.

*Adiantum* -

Silver City, New Mex.  
Jan. 12. 1881.

My Dear Dr. Gray: At the  
plant of which I now send  
a capitulum I have worked  
hard, in expectation of finding  
a published genus into which  
it might fall; but I  
guess there is none for it.  
In spite of the strong per-  
sistent - palae of the receptacle  
it seems to belong to the  
Eupatoriaceae, near Cuscutachloa  
& Kuhnia. At flowering  
time, most of the leaves have  
fallen, and it looks a ~~very~~<sup>needy</sup>  
~~scanty~~<sup>scanty</sup> of slender stems,  
the fine branches terminating  
in a head of flowers.  
But before flowering it shows

opposite leaves, somewhat-  
resembling those of Pericoma  
canadensis, but running into  
a very great variety of  
shapes, there being no two  
alike on a plant.

If it will constitute a  
genus I shall greatly  
rejoice in an opportunity of  
dedicating it to one of  
the finest gentlemen of  
my acquaintance, the  
wealthiest merchant in this  
part of the world, by whose  
courtesy I was enabled to  
make the expensive trip to  
those precious San Francisco  
Mountains. the botanical results  
of which you will appreciate  
when you have seen all  
the fine things I brought in.  
I shall put a good specimen

of this thing into  
the next parcel I  
send to New.

I am daily hoping to hear  
of the arrival in New of  
my second century.

Sincerely Yours

Edw. L. Greene.

Silver City. Jan. 12. 1881

Dear Mr. Watson;

I must  
have sent you a specimen of  
my 308, which appears to me,  
after my careful study, to be  
of no published genus; evidently  
of Eupatoriaceae in spite of the  
peristome holes of the receptacle!  
If it is new I shall rejoice in  
a chance of rewarding Mr. Crawford's  
generosity in bearing my expenses  
to & from those precious San Geronimo  
mountains; particularly as he  
is one of the finest gentlemen in  
the whole range of my acquaintance  
and one who will fully appreciate the  
honor conferred.

I still wait & long to hear from  
you.

As ever.

E. L. Greene.



Silver City, New Mexico. Jan. 16. 1881.

Dear Dr. Gray:

A few days I took a 23 miles walk across the Bear Mountains in a direction not before taken by me; and among interesting notes made was this. On a ledge of rocks in the heart of the mountains was a Brickellia, dead & dry, but with the leaves on, as well as many poppus-bearing akenes: the poppus feel as distinctly plumose to the naked eye as those of Rubria! It must be an undescribed species; & I will try to get when it grows next fall, for material. But later in the same day I found Rubria eupatorioides and my Brickellia Vincentiana, (which I hope you have now seen, in that second parcel,) both in the same dead state; and upon comparing akenes & poppus of the two, upon the ground, after months of exposure, I could not trace any differences! B. Vincentiana I noticed had a really plumose poppus when I diagnosed it; but I thought it was less distinctly so than Rubria. But upon the whole I am greatly in doubt as to whether I ought to publish it as Brickellia or Rubria. My own judgment would be that Brickellia is utterly invalidated by these two new plants. But I dare not publish the one of which I have material, as a Rubria till I hear what you think about it.

The Apaches are upon us again after a three  
months peace. Night before last ~~was~~ stage  
from the east was taken in - mail destroyed,  
driver & four passengers killed!!!

As ever yours  
Edw. L. Greene.

P. S. My Brickellia Vincentiana was not in  
either parcel sent to Raw, so I enclose capitula  
herewith, for your inspection  
E. L. G.

Silver City, Feb. 2. 1881.

Dear Dr. Gray:

Now I must see if I can ward off the tremendous scolding which you are likely to have in store for me. When I received your note on the fragment of shrubby Asclepias which I had sent you in a letter, calling it A. Linaria I had already sent a large spec. in fruit only, to New. Dr. Hooker, in acknowledging receipt of the parcel mentioned no other plant of the package but my Asclepias pinifolia, which he deemed the most interesting thing of all, and asked for seeds of it, in hope that it "might prove hardy in England."

This was a manifest oversight, whatever it might be worth, against your view of its being A. Linaria. However as I did not know whether Dr. H. was or was not an expert in that genus, I remained in suspense, and did nothing, save to continue distributing to American correspondents under my own name for the, as I thought, most probable n. sp.

Now I. I got the flowers! They were not of even the group to which A. Linaria is referred. The buds instead of being "ovate & equalling the anthers" were spatulate-oblong & twice the length of the anthers, and the obtuse horn was well exerted, rather than being acute & nearly included as that of A. Linaria is described. I now felt quite confident that it was only the old story of which



there are a score of examples in my correspondence, of your referring a new species of my finding, to an old one and insisting on it for a year or so, then admitting it new.

Hence, I still would not, with the flowers, (which you had not seen) before me publish, until some one, better than myself had seen flowers.

Dr Engelmann had got home. He is an authority in this genus, notwithstanding that for a score of years he referred A. unciatis now to his own A. involucreata & then to his own A. brachystephana.

I sent him my very best specimens of flower & fruit of my A. pinifolia. He is of the same resolutely conservative mind as yourself, but he admitted this at once as a good new species.

So I expected, <sup>by</sup> ~~the~~ Drs. Hooker & Engelmann, so readily consenting, that you would, at sight of anything more than a mere fragment, would find your first impression wrong.

I had just got from Mr. General, a letter begging for an article from my pen.

This interesting book seemed to have a good deal said about it; so I added to the spec. char. quite a lengthy note, and sent it to him.

Four days after I had mailed it, came a second letter from you, repeating that my plant was only A. Linaria.



I thought I should easily be in time, &  
so I wrote to Mr. G. at once begging him  
to withhold the paper, at least, until I had  
heard from you on the flowers, after which  
I felt assured you would agree with me.

To my great surprise and deep pain, I  
was too late; the paper had gone to press on  
the very day of its arrival; & when my letter of  
four days later reached him, the Bulletin  
was in the hands of subscribers.  
Under the circumstances, I hope you will not  
greatly blame me, even if my species does not hold.

But I still believe it must stand. No such  
hoods & horns as this has, are ascribed to any  
published species whatever.

I have written to Cambridge long since, & know what  
I am to do with Mr. Coe's plants, which are  
now nearly ready to send.

Mr. Watson must be in Cambridge, for eastern  
correspondents tell me of having got from him the  
Bot. Cal. Vol. II. I, in despair of hearing from Mr.  
W. at all, sent to S. Francisco and bought, (while I  
could, & was glad to know I could buy at \$6.50) a copy  
of the desired work. I shall have to wait for you  
to be heard from out of England, on my presumed  
new composite, before I can print.

This Arctostaphylos, I find no account of; though I guess  
it may be nearly related to your H. subviscosa. I have  
but 3 spec. so you must have this preserved at New York if it is  
new.  
G. Wel. No. 100. S. L. Greene.

Silver City. Feb. 4. 1881.

By your note on Carphephorus in the  
Proc. Am. Acad. 1873, which I have  
just been reading, I perceive that the  
Rubioid Composita of which I lately  
sent a capitulum, dening it of an un-  
described genus, will easily be a  
Carphephorus, & for aught I know, of  
some well known species. The corollas  
are yellow! O. L. Greene.



WRITE THE ADDRESS ON THIS SIDE - THE MESSAGE ON THE OTHER

Prof. Asa Gray  
Royal Gardens  
Kew, near London  
England

Silver City. Feb. 8. 1881.

My Dear Mr. Watson;

It is very refreshing

to see your handwriting again, after so long a time of dearth. The Bot. Cal. vol. III came a week ago in perfect condition.

I had already bought a copy from California, for as soon as I heard it could be bought I lost no time. I have not understood that - any copies were to be distributed gratuitously; but no bill came with this year's set. What is it? If you have for disposal copies of Vol II, do send me one - immediately registered and tell me the price, so that I can send a post-office order, paying for the two, at one sending. My extra copy of Vol. II I have an opportunity to dispose of here in Silver City.

There are one or two of your notes on my plants to which I wish to reply, viz. 1st. That my idea of the white flowers in Ribes leptanthum is from what I have seen of it in the region where it was first obtained.

Throughout Colo. & N. Mex. I have never seen it of any color but white (which in drying gets a tinge of green, but not of yellow) as in the fragment I enclose, from the Moghler Mts. The Californian "var. (?) brachyanthum" which



of type. H. N. A. you will have to take this for the type of just one more sapifragaceous genus. Those calyces, capsules & seeds will never do to go with them of Whipplea modesta. They are more positively & strongly Gundlachian than those of G. nupifera itself! Whipplea modesta has its own very peculiar habit of growth, it is more, (erect-stemmed) mostly opposite-flowered inflorescence, not to repeat its particularities of whitish calyx, & of fruit.

In those Portulaca affairs, with a "sim instead of apals" I had overlooked the possibility of an enlargement of calyx, after pushing of apals.

Dr. Gray does not admit any Polemonium flavum, though everybody else does, though he does not know whether & refer it to Coccydium or Foliosissimum!

He had not seen flowers of Sacchopis punifolia, when he pronounced it A. Guinaria. Engelmann & Hooker have seen flowers & admit the species; still I suspect having let it go into print, after what you say. But, it has a spatulate-oblong hood twice as long as the anthers! St. Guinaria "nate hoods exceeding them" and the hoods in the latter are "acute, not exserted" is mine obtus & divided. How can the two be one?

I shall now trouble you often, I fear. As ever, E. L. G.

I take to be a good enough species, has flowers tinged with rose, but otherwise white, not yellow at all. I am sorry to have seemed to contradict; but from the original sketch's having always white flowers, I supposed the character would be constant. Dr. Gray wrote that there was in his herbarium no good flowers of the species.

Bigelovia juncea you will find to be very distinct from B. Bigelovii by its silicles apices: those of the latter being entirely smooth. Dr. Gray admits my species without hesitation.

About Whipplea & Gundlachia what he now says, on having received at Kew, my best specimens: "One can see that it ought to be a Gundlachia and not a Whipplea, even though the character of the former genus has to be altered & admit it." In habit and in shape of calyx & capsule, as well as seed, the two genera are "apparently as distinct as can be; and the latifolia shrub is in all these points wholly Gundlachian. But that in leaves & stamens it is like Whipplea is just as true. Still the preponderance of points is decidedly, is it not, with Gundlachia? But I guess when you good folks get out another big vol.

Postscript.

214 which you call Mollugo verticillata  
must be another species.

M. verticillata grows here, but only along ways-  
ides &c, as if introduced. This is of very  
different habit being erect, though spreading  
out its branches so that in the dried specimen  
it may seem prostrate. It grows on hills in  
oak woods, or on the open plains.

I find no other Mollugo attributed to this region;  
but this is so common that I can not believe  
I am first to collect it. I must now  
distribute to my correspondents, this & many  
others by withered plants, ~~to my correspondents~~,

and I am ticketing it Mollugo glauca,  
n. sp. for I am sure it will hold distinct-  
from verticillata. It is very glaucous, as you  
can see from my younger specimens. I will  
not, however, print it without permission

from either yourself or Dr. Gray. I do  
wish you may have time to look at it again.  
In view of several Mexican species of Cupressus  
to one of which the Homigueria may be found to  
belong, I leave it to you to dispose of as you  
may find necessary. I know to whom specimens  
have gone under my name, & can write to them  
all to suppress it if it proves necessary or  
desirable to do so.

Mr. Sargent can show you } Sincerely Yours,  
wood, bark, &c. of the  
Cupressus!

Edw. L. Greene.



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Silver City, N. M. Feb. 10. 1881.

Dear Mr. Watson:

I am now sending you another small parcel, and for the present, the final one, of my plants. With your referring my 185 to Amarantus albus I am not at all content. The plant has the prostrate habit, and the general appearance, color &c of A. blitoides & when I collected it I thought it ought to be made perhaps a var. crispus of that species. But I now believe you will find it upon more careful examination, a distinct species.

The strongly crisped margins, and the tooth-pointed apex of the leaves seem to me to be very characteristic.

The plant is not very common. I send now another branch. I have plenty of specimens.

The Nolina I have sent I took to be N. erumpens for the reason that its fruits burst open long long before the seeds are ripe; so if this is microcarpa, (as of course you must know) it ought to be transferred to the other section of the genus.

I thought that - "Echinocereus arborescens" was well marked by the mucronulation which covers even the prickles of the fruit; its size and hispid-hairiness to me, I suppose, remarkable, but I shall of course do nothing more with either of my "species" since you who are more familiar with the genus, hesitate about them.

Sincerely Yours

Edw. L. Greene.

I have just in care of Mr. Purdy's plants, a Arctostaphylos.



Silver City, Feb. 17, 1881.

Dear Mr. Watson:

I did think, a week ago, that I might, for this winter trouble you no more: but to-day I have been at work on my Graphalia, and can not see my way out of difficulties without your help.

My no 362 you called "G. polycephalum"

Now I send it again, & try to know if I am not to be confirmed in my suspicion that your "polycephalum" was ~~not~~ a mere slip of the pen? Did you not mean to say "decursum"?

I see that the leaves are decursum & indeed I can find not the slightest difference between any plant & eastern specimen of G. decursum. 480 I take to be G. Sprungelii; it is what I have always understood to be that; & figuring from that basis 397 is, if not Central Mexican, something undescribed. Its atoms are only about  $\frac{1}{2}$  the size of those of G. Sprungelii, & the involucral scales are of a different shape & color; moreover it has not a trace of the fragrance of that species; but the most obvious mark of the species is the peculiar style of inflorescence - the very different arrangement of the heads, - like a Filago, or like some of the smaller species of the same genus. The greenish hue of the scales seems to suggest a good name; But you may find something like it already named, in your great stone house; & I shall not dare to print until I hear.

That Hymenopappus I certainly collected also

in 1877, & I think sent it; but I have  
no name for it from Dr. Gray, I find  
no account of any such plant anywhere.  
Do you find it with you, from any other  
collector? And has Dr. Gray left a M.S.  
name for it in the herbarium? If he has  
not, I guess I will publish it under the  
name which its peculiar habit suggests.  
I am going to make inquiry, through the  
Dr. Gray, about the color of Ribes leptanthum  
quoting what you say, & see if with the  
help of observers in different localities, we can  
get out of the tangle!

Very Truly Yours

Edw. L. Greene.

Silver City March 3. 1881.

Dear Mr. Watson;

Your letter of Feb. 22. is here, but the book not yet. Registered matter does not get along so rapidly. I shall look for it about two days hence.

I enclose now a p. o. order for the \$11.00.

Those two Atriplices & the plant I put - next to them (upon affinities I am by no means about) I have distributed now, with numbers, but no names. One Atriplex seemed to answer to the description of A. coronata but I did not feel at all certain that it was that. I now only ask that when you get to the study of these things, & decide what to call them you let me know, so that I can send the names to those correspondents who have received specimens.

On finding, last spring, the original Delphinium scaberrimum I thought I saw at once that what we had been taught to call by that name in Colo. & Calif., was a distinct species; & I meant this winter to find out, if possible the characters. But I now guess you have done the work. Do you recognize & include in your D. glaucum a Colorado form? But I will forbear to bother you with questions.

As ever. E. L. Greene.

Dr. Greene says my Bigelovia confertifolia is more like Aplopappus confertus than any other plant; still it is more than a very few from of that - he admits and adds "imprimatur" as another Bigelovia!

Silver City, March 2, 1881.

Have just registered to your  
address two packets of plants  
for M. Cosson of Paris, which Dr.  
Gray has been calling for...

He gave no directions about sending;  
so I follow those of last year &  
send to Cambridge, leaving the  
rest to be done by those who know. S. L. G.

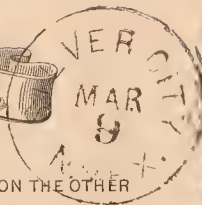




WRITE THE ADDRESS ON THIS SIDE—THE MESSAGE ON THE OTHER

Mr. Serrus Watson  
Botanic Garden  
Cambridge  
Mass.

Silver City, March 9<sup>th</sup> 1882  
Dear Mr. Watson: What I suppose  
to have been telling is, that my Bot. Cal. was stolen from me 4 years ago, & I could never  
get another; 2<sup>d</sup>, that of vol. 2. I had had one  
brought in Cal. & sent me before I knew  
that I should get one from you; so that  
when yours came, it made me the possessor  
of 2 copies of vol. 2. This morning I am  
not a very happy possessor of 3 of vol. 2.  
and none of vol. 1. I now return the  
one which came this morning. Please send  
vol. 1. as quick as possible; I have long been needing it.



WRITE THE ADDRESS ON THIS SIDE - THE MESSAGE ON THE OTHER

Mr. Severus Watson  
Botanic Garden  
Cambridge  
Mass.

Silver City, March 14, 1881,

Dear Mr. Watson:

This favor of yours dated March 1. puts me in good humor again; though I know I did wrong if I did lose my temper on the arrival, the other morning of a 3<sup>d</sup> copy of Bot. Cal. vol 2; when I was anticipating a delightful week's work on Cal. plants, with the help of both volumes of your superb work. I had no reason in me to expect you to remember what I had written a half year ago about the loss of my vol 1, & my want of another; and I never thought that my "Vol. II" would be legible as meaning either Vol. 1. or Vol. 2.

Well; The collecting season begins again, this week when I am, and barbarian studies will have to be dropped; save that I will this week write out & send to Bot. Gaz. spec. char. of about 8 or 9 more n. sp. in which will not be included the Amarantus crispus. though for reasons which I will not talk of now. I can not think that I am altogether wrong about it. I'll see, by & by.



My Asclepias paucifolia, which Dr. Harten thought a very  
"curious" thing, and wanted seed of, & which also  
Dr. Engelmann, who is up in these things accepted as a good sp.  
will certainly have to be given up if the flowers Dr. Gray has  
sent are of authentic A. Linoria; and I am very angry at  
myself for not having waited for his decision.  
And yet, if Cumacilla's plant has "buds ovate, <sup>perhaps</sup> equaling the  
stigmatic disk" as described, this of mine, & with it, much more  
Mexican material will form a distinct species and I will be all right.  
But I have little hope left, and plenty of justification; most likely  
the flowers were wrongly described; for in what Dr. G. has sent, just  
as in my plant, the buds are spatulate - flony and full twice  
the length of the anthers.

I hoped that, in these very rare cases of "Whipplea ontariensis"  
you would find some ripe Fendlera seeds! In the article which  
I suppose may already be in print in Torr. Bull. you see I have  
tried to make it clear that, because calyx, capsule & seed are  
strictly those of Fendlera the plant belongs there. The matter of  
stamens must be of far less weight than that of these three; not to  
speak of habit, <sup>our habit</sup>, both of which are wholly on the side of its  
belonging with Fendlera. But I wrote too long, I sincerely, I.D. Greene.

The Cupressus too, I shall leave to you to  
dispose of as you <sup>find suitable</sup> see your studies of the genus;  
for I am afraid it might be a known & named  
Mexican sp. Neither do I print my  
Hymenopappus robustus, though it is clear that  
two sp. are included (& this is one of them) in Dr.  
G's H. flavescens. It was because he would  
have the robust one to be flavescens that  
when, at last I found the "original flavescens"  
I thought it must be new, & called it  
H. montanus. Dr. Engelmann confirms  
my Euphorbia coriicola & Linum Neo-Mex.  
as good n. sp. but, mirabile dictu! will have  
Galium humile to be a variety of his  
G. aurantiacum!! Still he will come  
to the patent truth when we be thoroughly  
looked at his specimens.  
You will have seen in Bot. Gaz. that I have  
printed both the Bigelovias. I did not do  
this in defiance of your opinion that one  
was a var. of Bigelovii and the other B. spatulata  
for Dr. Gray, having seen both writes that  
they are good species; and he knows more than  
we do about these things, of course.

Silver City, Mar. 16. 1881.

Dear Mr. Watson;

Your favor of March 4 is at hand; and we will have to leave the *Gnaphalium* affair to Dr. Gray I guess. I have called his attention to the very characteristic arrangement of the heads in my proposed species; but I did not, I think, allude to the akenes which are hardly more than half the size of those of what I have always taken for *G. Sprengelii*, besides being of a darker color and perfectly smooth. I presume it may save you some trouble if I send you separate leaves of my new species, which you can keep together for reference. I had no idea last summer, when I began, that by this time I should have, in my season's harvest near 30 undescribed plants; or I might have seen the propriety of saving them for one article. Indeed I had no idea there would be half that number.

All which I have published before are the two on those species of *Aclepias* which Dr. Gray has summed up in his last paper in Proc. Am. Acad., not including the later *A. pinifolia*, which I fear will be only a synonym; though it original



A. Linaria can be got at with certainty, and is found to have such buds and leaves and such sparse foliage as are ascribed to it, I am very confident I will be all right with my pinifolia.

However, the hope is but a feeble one at present.

I beg to trouble you with one more composita; a thing which I have not yet sent to Kew, or anywhere else because I wait for flowers which I think will be likely to appear in April.

Flowering, as it does, before the leaves appear, in the manner of Tussilago I expect it to prove itself an ally of that genus, and, unless it be the marvel of a Homogyne on the borders of Mexico, it will be of a new genus. But again, if any Mutisiaceae have that habit of sending up their scapes, and flowering in advance of the leaves, it may belong there and be a Chaptalia.

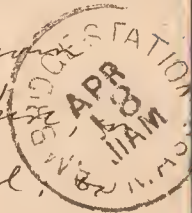
When you have leisure will you look (particularly among Mexican Mutisiaceae) and see if such a plant is to be found there. I shall never rest until I get a genus for Mr. Crawford, whom we owe so much to, and who will help us more and more so long as I am his neighbor. This plant is subalpine, growing on the coldest, northward slopes of our highest mountains.

Destroy this ticket if your first named specimens to correspond of course.  
Sincerely Yours,  
Edw. L. Greene.

Silver City 21. March 1881.

Dear Mr. Watson; At the time when it was  
new I neglected to get a copy of your  
"Index". Now, I can not tell where  
how to send for it. You can tell,  
in case you have copies by you. Please  
register one to me and mail a  
bill of price (which I have forgotten) + postage.

Sincerely Yours Edw. L. Greene.







WRITE THE ADDRESS ON THIS SIDE—THE MESSAGE ON THE OTHER SIDE

Mr. Sereno Watson

Cambridge Station

Massachusetts.

only glandular hairy, you will,  
I know, stand aghast, or else  
be tempted to tell me I don't  
know what genus I am talking  
about. I hope to secure the  
fruits of both so that we can be  
sure what is to be done with  
them. Possibly only one species  
is in this region, yet both leaves  
and ovaries seem strongly dissimilar.  
Dr. Gray asks if I am likely to  
get as many n. sp. this year as last,  
and I see no reason to doubt that  
I shall, if I can only get to the  
places yet unvisited.

The great mountain system here is  
the Mogollon Range, into whose <sup>foot</sup> hills  
only, I went last year, & that in mid-  
April, but brought out Draba Mogollonica,  
Delphinium scaposum and, no matter  
what others. But this year I must  
get to the alpine summits, yes, & the  
sub-alpine forests, which botanical has  
never been, As ever yours E. L. Greene.

Silver City, March 31, 1881  
Dear Mr. Watson;

These stamps will  
suffer less than the volumes did  
in traversing the continent, so  
I start them back again!  
I think you did not see the  
letter in which I first made  
known my intense desire to  
get Bot. Cal. Vol. I. But no matter.  
It was only after having received  
from Cal. the copy of vol II, that  
I authorized my correspondent  
to offer as much as \$5.00, if  
necessary, for a copy of vol I for  
me. He then wrote back that  
he was confident it could be  
had (had been reprinted) at the  
original price, by addressing  
you. Then shortly after that  
came the Bot. Gazette & with  
both volumes advertised. I am  
very far out of the world, and

all such good news are state  
with eastern people before they  
reach us here.

Well, in a week I shall hope  
to see vol. I. My extra copy of vol.  
II, some one will come along  
and wait before long.

Dr. Gray's letter informs me that  
Dr. Cassin will probably send  
you a postal order for what  
will be due on those plants.

But who knows what the amount  
is to be. I sent him 600, a  
year ago, from Cal. & Col. and  
got but \$42.00 for them, which  
may perhaps have been enough.

But he can not get much  
more from me at that price.

All my last season's collection  
is gone at \$10.00 per hundred.  
I do not know why Dr. C. or  
anybody else in Europe should  
have them for less.

The sets are small, and certainly  
very rich in n. sp.

Dr. C.'s was a small set (250  
species) and Dr. Gray wrote  
a year ago that for these  
N. Mex. plants the man would  
willingly pay "the highest price".  
If I tell you that a man over  
on the S. Francisco River, barely within  
the eastern border of Arizona has  
sent me a flowering specimen  
of a Megarrhiza whose leaf characters  
indicate a n. sp. you will be  
as surprised as I was at the  
sudden expansion of the <sup>known</sup> geographical  
range of this genus.

If to that news I add that  
two days since I found in  
New Mexico, another Megarrhiza  
differing from that Arizona one  
& all others, in 8-toothed leaves  
and an ovary which looks as  
if <sup>the fruit</sup> it would not be spiny, but

16<sup>th</sup> Apr. 1881

1<sup>st</sup> page with Caloch. Greeni

+ if a known species, more possibly C. nuncinata,  
H.B. 12. My hope of its being what I provisionally  
call it a new gen. Crawfordella, is based on the  
probability of its being not a Mutisiacea at all,  
but more related to Gussilago + Homogyne.

I must next seek, climb those summits  
where it grows, whence the snow has but just  
disappeared + see if I get the flowers.

I know Megashiza too well to be deceived as to  
the genus of these new Cerculites. I fear however  
that the business will be left in bad shape, if I  
have been within a month, for the fruits will hardly  
be full grown, or half grown by that time.

The nearest locality is 40 miles away, and in a  
cañon into which none but a skillful climber  
can get.

I shall have a nice bundle of specimens to contribute  
to your herbar. before I go hence, I hope.  
In Berkeley, I shall have a rest from botany, &  
you a respite from my interminable epistles.

Address me at Silver City still, for two or three  
weeks, if there be anything to communicate, or if  
I can do you any errand.

As ever yours P. L. Green.



Silver City. N. Mex. 3<sup>d</sup> May 1881.

Dear Mr. Watson;

I have just come in from a two week's absence, & find your post card, and the Index awaiting me. Please find the \$2.35-herewith enclosed. I also register to you a small parcel of plants for the Gray herbarium. Most of them are things which I take to be n. sp., but if you find me wrong in any cases you must tell me so, & so keep me from making synonyms. by publishing, for you to be bothered with hereafter.

Dr. Gray last year would hardly believe my Draba Mogollonica to be perennial. I now send a specimen which clearly proves it so; notice the portion of a last year's scape still adhering to the caldery.

Senecio Cardamine I see from the look of the dried specimens will not easily escape being referred to S. aureus. Forms of aureus abound in the Mogollones, but none of them approach this at all, in the aspect of the living plant. The leaves lie flat upon the ground, have a texture and a denticulation of their rim sort-, besides being very beautifully whitish- or purple-veined. The first-  
patch I came to had no sign of flower or bud on scape, and I said to myself "a Cardamine & probably new"; and was amazed to find it afterwards flowering as a Senecio. What do you think of it for a species? I have no doubt.

I do not see what is a new species M. mucronata, Palmer found the same at Walnut Springs.  
The 2 Megorhiza of which I wrote, are but one, though the fruit varies from nearly smooth to very prickly. Through nearest to M. mucronata if any, it is still very distinct, as I understood the species. Ripe seeds are ~~not~~ yet & obtained. I account this the most surprising thing I have found in New Mexico - more than a thousand miles away from all its kindred.

Eragrostis dumosa, scant material on which to found a species, no doubt, but are not those wings of the branchlets very distinctive? It is a much bush 5 or 6 feet high, much branched, forming thickets on dry slopes. Flowers had apparently been killed by a late frost. One branchlet (with simple leaves) is from the lower part of the bush, the other from the top. Very probably = E. arborescens.

Phacelia caerulea, Formerly 3 species were comprehended in P. eximata, Dr. Gray, at my instance, separated what is now P. arizonica. This one with very small, blue corollas, I am now sure is distinct from the plant with large violet ones from which the characters of P. eximata appear to have been chiefly drawn.

P. caerulea is distinguished from that by it is pale blue corollas, not more than  $\frac{1}{4}$  or  $\frac{1}{3}$  as large, the margin always minutely crenulate, the stamens &c very small & not, (in the fresh spec) at all exserted. It is, upon the average twice as large a plant, & has a strong but not disagreeable odor, while true P. eximata.

To near R. p. is common as found by me in the  
highsmith & wood in N.M. & of florissimum

when bruised is disgustingly fetid. Both are  
common here, and there is not the slightest  
indication of any running together.

Ribes Mogollonicum, has leaves with the odor  
of R. nigrum, is six or seven feet high; and  
some one of the swarm of botanists who have  
come to these regions will probably find it bearing  
a black, palatable fruit. As a species, the  
flowers mark it well: sepals not reflexed, nor  
even more than campanulate-spreading, very  
elegantly veined with <sup>purple</sup> lines. Had the flowers  
been a little larger I would have called it R. parmassiiflorum.  
I still fail to get pink fruits (I am always too early)  
of my Astragalus Mogollonicus, but it is surely  
a n. sp. of the Mollissimum. Some old fruits of a  
former year, picked up from under the leaves, near  
the root, show well enough the character of the legume,  
which is apparently not more than half the size of  
that of A. Bigelovii, & of different shape.

I may yet get new fruit - before I leave these parts.

I have obtained this year better flowering specimens  
of Delphinium scaposum, & in a single instance  
(which I send to you) with handsome pink-colored  
flowers.

As Ever yours  
P. L. Greene.

Address still  
Silver City

Lup. Rusbyi = L. Arizonicus  
Polygonatum pinobetulae must be P. giganteum



lie flat upon the ground and  
have so precisely the look of those  
of Cardamine purpurea ~~which~~  
again I first saw them, &  
had not yet seen flower stems  
I thought I should have a  
new Cardamine, & was never  
more astonished than when I  
found the thing flowering into  
a Senecio.

The Megasthiza seems to me to be  
the most surprising of all the  
discoveries I have made in N.  
Mex.

I do hope you will find the two  
parcels of last fall, awaiting  
your return to New.

Address me now at Berkeley,  
Alameda County, California

As always yours

Edw. L. Greene.

Prof. Hae "gratefully."

Silver City 10<sup>th</sup> May 1881.

My Dear Dr. Gray:

Perhaps it is  
quite too early to be sending  
a letter to New, but I write  
now, for the reason that, for a  
month or more, I shall hardly  
have another opportunity.  
Two days hence I hope to set  
forth upon an expedition through  
one of the least known sections  
of the Southwest. I am  
going across the Mogollon Mts  
(whose sub alpine summits  
no botanist has seen) then up  
the Rio San Francisco, to its  
source in the White Mts,  
across that range & down  
the Little Colorado, until I  
am opposite Prescott, then  
to that city. There is no road



except for perhaps one third of  
this distance, but good Indian  
trails, so that I can take  
a pack animal, and bring  
in some specimens. Of course  
I expect to make on this trip  
a very interesting collection.  
When I get to Prescott, I may  
either proceed to San Fran-  
-cisco direct by stage & rail,  
or if time can be taken for  
so long a journey, "over land"  
I shall continue to follow the  
trails until I have crossed the  
Sierra Nevada.

I doubt if you will rejoice to  
hear that I have accepted a  
call to a pastoral charge in  
San Francisco Bay, but it is so.  
I go to Berkeley; but I leave  
this delightful New Mexican colony  
very reluctantly.  
In one of your latest letters

you were wondering if during  
the coming season I was going  
to pick up more n. sp.  
So far I have done even better  
in that way than I did last.  
Two trips already made into  
sections of the country not visited  
last year, have resulted in  
1 - perhaps 2 or 3 new ones.  
I shall try to mail to you, to-  
-morrow, a small registered  
parcel containing all of these.  
I have already sent them  
to all to Mr. Watson for you,  
and want him to contain  
them.

I rather anxiously am to hear  
that my Sonchis Cardamine ~~sent~~  
in the dried specimen seems to  
you to be referable to S. aicens?  
The Mogollons abound in places of  
the last named species; but none  
of them approach this. Its leaves

$\frac{2}{3}$  or  $\frac{3}{4}$  as large as those of  
musculata, and if I publish  
the thing I will call it-  
M. Gilensis, for its habitat is  
the deep-sandy shores of  
the Gila River and its tributaries,  
in both St. Mex. & Arizona.  
The leaves have neither the  
musculata upper- nor the  
glauca under-surface of  
M. musculata, the female  
flowers have abortive stamens,  
the very small fruits are  
usually very spiny, seldom  
nearly smooth; they are also  
always 4-angled, and the seeds  
are much less round and  
regular than those of M.  
musculata.

It is time, I think, for us to  
be expecting another "Contribution"  
from you! Sincerely Yours, O. L. Greene

Berkeley, 15<sup>th</sup> July, 1881.

Dear Mr. Watson:

I have a  
great many forms of Polygo-  
num imbricatum, gathered  
in from different sections  
of its wide range, but see  
nothing approaching what  
I now enclose to you in  
the character of the stipules.  
The akenes too are perfectly  
smooth and shining, as I  
find them in no specimen  
of undoubted P. imbricatum.

The plant occurs among  
some specimens given me  
from the Yucumtli by Dr. Parr.  
I will dedicate it to him  
as a species, unless you

in your collection find  
intermediate forms which  
forbid its separation.

There are bundles of plants  
from Europe for me in  
your care I believe.

Can you send them to me  
partly soon? I suppose they  
are too large to mail and  
will have to come by express.

There will also be charges  
due on them between New  
and Cambridge no doubt.

Can you deduct the amount  
from what comes to me  
through your hands (as I  
suppose) from Dr. Casson?  
If so, it will save some  
travelling to and fro after  
small P.O. orders.

You were the only one of my  
correspondents in the U. S. who  
never declined to accept my

Senecio Cardamine for a species.  
Dr. Gray confirms it without  
any hesitancy, and thinks I  
need not fear that any one  
will want to put that into  
S. aureus.

The N. Mex. Megarrhiza appears  
to me well distinguished  
from M. musicata in leaf,  
flower, & fruit. In the latter  
the leaf is glaucous beneath;  
and the fruit is considerably  
larger, and smooth, or nearly  
so.

If my plant has been found  
so far west in Ariz. as you  
assume me, then my proposed  
name exilis will hardly be  
appropriate. Dr. Engelman  
who is struck with the small  
size of the fruit suggests micro-  
carpa: but the fruits are

Berkeley, July 26. 1881.

Dear Mr. Watson:

Already I  
begin troubling you with  
proposed additional species  
to the Bot. Cal.

The two Navarretias in the  
little packet sent herewith  
will perhaps be found with  
you, but probably wrongly  
placed.

The one which I wish to  
call, Gilia Beardsleyi is no  
rarity, but occurs from  
several localities, in the  
Cal. Acad. Herbarium, and  
is there confounded with  
G. squarrosa, from which  
it is distinct - as can be.



The one named G. heterodoxa  
is nearly approached by a  
good many forms, in all except  
the most welcome char-  
acter of its stamens. These  
are not only very unequally  
inserted - too much so to  
allow of the plants being a Gilia  
at all, unless at least a  
considerable part of Collomia is to  
be given up - but are long  
exserted and as strongly declinate  
as in almost any Polmonium.  
Of this strange plant I find  
no trace in any of the barbarians,  
and I regret not having obtained  
any fruit. But Dr. Parry who  
has passed to go everywhere,  
& who was with me when I  
found this, promises to revisit  
the spot soon and get the  
desired older specimens.  
Have you it at Cambridge?

The Aphelappus from Oregon  
seems very unlike any  
species known to me by  
specimen or description, yet  
I dare not publish any  
name for it until I know  
that Dr. Gray has not got-  
hold of it and named it  
already; though it appears  
to have been collected since he  
left America.

That arboreal Psoralea I  
think I have correctly identified;  
but it is not important -  
since it can hardly be  
deemed naturalized here,  
wherever it may have  
come from.

Very Truly Yours  
Edw. L. Greene.

Berkeley, California  
5<sup>th</sup> Aug. 1881.

Dear Dr. Gray: I have heard  
that you are expected at -  
Cambridge in October of  
this year. If you are  
to return so soon, then  
I must not mail to  
Rex, but to Cambridge,  
a parcel of plants,  
chiefly compositae, which  
I have been gathering in  
for you from many  
sources, since I cannot  
California. Many new  
species are brought to light  
even in California, among  
which I am most anxious

to have you see my  
Raillardella crocea, which  
has the naked scapes of your  
§ 1. of that genus, with the  
separate involucral scales  
of your § 2., thus destroying  
your § 2. entirely; but the  
best thing about it is that  
its handsome, broad cuneate,  
deeply 3-cleft rays (!!!) (saffron  
color) being the rays of a  
Heleniodes indicate the  
true place of the genus to  
be in that tribe, if I guess  
rightly.

Among 3 new Senecios is one  
from the upper Columbia  
(S. Howellii miki) to go by  
the side of the S. Greenei  
with bristly-tufted, cuspidate  
style-tips.

Rusby, still in N. Mex.,  
has been urged by me

into the higher Mogollons,  
where he has sent me  
late, besides a half dozen  
other <sup>living</sup> things, a new Primula  
which fairly rivals P. Parryi  
in beauty; not more than  
half as large in leaf & stem,  
but corollas rather larger;  
calyx white-farinos, leaves  
differing from those of P. Parryi  
in that that are very  
conspicuously denticulate.  
So you must tell me  
when you will have a  
mighty interesting parcel  
sent!

Very Truly Yours.  
Greene.

than 10 per cent of which were  
n. sp.

Dr. Gray, who was to  
collect the bill for me,  
was duly informed at the  
time of sending, but had  
of course, forgotten.

Very Truly Yours  
Edw. L. Greene.

Berkeley, California

6<sup>th</sup> Aug. 1881.

Dear Mr. Watson;

The packages  
of plants from Dr. Reck are  
safely at hand, for your  
sending of which, as well  
as for your letters, and the  
various herbarium errands you  
have done for me I feel  
greatly indebted.

I am in despair about those  
milkweeds. I know two  
very distinct species, both  
of which are referred to *A.*  
reticulata, while the question  
of what is original *A. reticulata*  
could apparently never be  
solved by a reference to even  
the Candollean collection.



Decaisne says, at the end of his  
very insufficient description  
"v. sp. in herb. Wall."

You appear to have noticed,  
what Dr. Gray & all the rest  
have always overlooked, the  
close affinity of *sulcata*, Torr  
with *longicorn* Benth.

The *Podostemma* § of Dr. Gray  
has not only one but 4  
species, namely, *longicorn*,  
Benth. *Wrightii*, Greene  
*sulcata* (Torr's Plant) and  
*myctaginifolia*, Gray. the  
main characteristic of which  
§ is the long solid "hoods"

All these species were present  
to Dr. G. at time of his  
working up the genus, yet  
he was so far from looking  
at them closely, that what  
I have published under the  
name *Wrightii* he had

not distinguished from  
*longicorn*

I have at last prevailed on  
a very poor collector, but  
a very persevering and  
hard working fellow, Busby  
to go into the higher  
Mogollones in N. Mex., where  
I could not get last year,  
and he sends me thence  
a very rich bundle.

His *Primula* I think  
fairly eclipses *P. Pauciflora*  
in point of beauty.

I enclose a specimen  
now, in advance of the  
sending of a larger parcel  
to contain many novelties,  
among them not a few  
Californian ones.

Dr. Cooper owes me \$25.00  
for 250 of my very  
choicest N. Mex. plants, more

Thus far I have sought it  
in vain, in the Acad. herbarium.  
I am going to beg of you in  
my great favor. Will you,  
before tying up those Beck  
parcels, search in Asclepias  
for a specimen of "*A. subulata*"  
collected by me, as Colo. Desert  
Calif. in 1877. and send me  
a flower of that specimen?  
I feel very sure the flowers of  
my plant are extremely unlike  
those of the plant which you find  
*A. subulata* in the herbaria: nor  
do I believe the *A. subulata* of  
your ~~area~~, is even that of Decatur.  
So me the kindness some time  
to ask me to hunt up things  
for you out here.

Sincerely Yours

Edw. L. Greene.

P.S. I shall soon have a package  
for the Cambridge herbarium.

sent packages by Aug. 22<sup>d</sup>  
+ with 12<sup>c</sup> stamps.

Berkeley, California  
13<sup>th</sup> Aug. 1881.

Dear Mr. Watson:

Your letters  
of July 23. + Aug. 4 are  
before me.

In regard to the package  
of plants from Dr. Beck,  
since you are so kind as to  
suggest it will you take  
upon yourself the trouble  
of dividing the package into  
2 and mailing them?  
At all events I enclose  
herewith stamps for 2  
4 lb packages (registered),  
with the request that you  
mail them, if you have  
time for all these things.

I wrote Dr. Gray that I must  
have from Dr. Coe \$25.00  
for those plants, and sup-  
posed the money would be  
sent, as formerly, to Cam-  
bridge. Perhaps Dr. Gray  
will have received the money  
in Europe. We may as well  
wait and hear.

Yes, the plant which I  
published as Phaseolus parson-  
hus. I took at first to be  
a Cologanina, the flowers were  
so large and had so decidedly  
the look of those of that genus;  
but a feeling of pieces dis-  
closed the character of Phaseolus.  
Well, I am glad to have your  
positive assurance that my  
proposed "Gilia Brandegei" is just  
G. cotulaefolia. But the suggestion  
that my "Gilia heterodoxa" may  
probably be included in Collomia

heterophylla increases, upon  
the whole, my perplexity in  
regard to Nauasintias,  
I thought I knew C. hetero-  
phylla perfectly. It is com-  
mon, and so far as I have  
seen, not very variable.  
But, there is no use in telling  
over, in ink, the story of  
my perplexity.  
In my search after a descrip-  
-tion of that splachnoides from  
Spain. I certainly failed to  
alight upon the description  
of A. Hallii, & had forgotten  
for the time, that there had  
been such a species published.  
Now, I remember, and guess  
I know when it was printed.  
If I ever meet with any  
scraps, (I don't expect more)  
of Dr. Kellogg's Boralea fruticosa  
I shall send you some.

= *A. verticillata*, var. *subverticillata*

1881.  
Berkeley, Cal. 15<sup>th</sup> Aug.

Dear Mr. Watson:

Here is still another *Aclepias* from Arizona, which appears to be new. It is near to *A. Mexicana*, though sufficiently distinct by its twice larger flowers, shrubby habit and leaves in pairs rather than verticils. But I don't trust to Dr. Gray's description alone for my assurance that it is not his *A. Schaffneri*. It is far indeed from answering thereto, but I wish a comparison to be made, and, in Dr. Gray's absence, upon



whom can I call but  
yourself?  
Sincerely Yours  
Edw. L. Greene.

Berkeley, California  
31<sup>st</sup>. Oct. 1881.

Dear Dr. Gray:  
Your letter written recently from New  
came in some days since.  
I now wish to say that the  
plant in my parcel was  
awaiting you at Cambridge  
which is ticketed Senecio  
Rusbyi. From I now believe  
to be only a very young  
state of S. Bigelovii. Gray.  
I never thought of such a  
thing until, in response  
to my request Mr. Rusby  
collected & sent me mature  
specimens. These last at  
once give the impression  
of S. Bigelovii, though the

heads are considerably smaller & more numerous than in any other specimens of that species which I have seen, and possibly it is distinct. I have not yet actually compared Rush's plant with any good *Bigelovii*, and it may be that, in the involucre there is a good specific character.

My best find of this year as has been made recently in your *Lagophylla filipes*, which can more easily be what H. & A. made it - i.e. a *Hemizonia*, than a *Lagophylla*, for its chaff is a 12-toothed cup!

But its achenes are elegantly crowned with a little saw & a pappus with

crenulate margin!

The root is not only strictly perennial, but strongly rhizomatous! It will constitute a good generic type.

I shall send you a nice specimen of this, and some other interesting composites, when I have done my study of the thing.

As Ever Yours

E. L. Greene.

filipes, +1, +8. + Lagophylla

filipes Gray, a thing whose  
fruit, and whose remarkably  
perennial, rhizomatous root  
I am the first to see.

But I must not chat or gossip!

Sincerely Yours

Edw. L. Greene.

Berkeley, California  
Dec 7. 1881.

Dear Mr. Watson:

Our friend  
Dr. Engelmann is exercised  
a little on the subject of  
the genus Cupressus.

My C. Arizona has this  
year been sent to him by  
Rusby, Lemmon and  
by Pringle. The doctor  
likes not a geographical  
name for it, but would  
have me call it C. rubra  
or C. erythrocarpa or  
C. erythrophloea.

The chief objection against  
making the change I  
conceive to be this; that



specimens of my collecting  
are, with my M.S. name  
"C. Arizonica, Green n. sp.",  
in nearly all the herbaria  
of the U. S. and in several  
European ones (Kew &c).

It is therefore, in a man-  
-ner, published.

Should it be printed under  
some other name, it seems  
to me that in that case  
even, the situation would  
demand the quotation  
of C. Arizonica as a synonym.

I am still as far as ever  
from being able to thoroughly  
satisfy myself that the  
tree is not identical with  
some of the named but  
little known Mex. species.  
Therefore I do nothing  
more with it, but leave

it to you or Dr. Engel-  
-mann, or to whomsoever  
the task of monographing  
the genus may devolve upon.  
What do you hear from  
Mr. Cosson?

He is very slow pay!

Always a year or more!  
Shall not some of these  
winter months bring  
to us some "Contributions"  
from you?

I sent off to our little  
Gaz. Bulletin, (for Jan.)  
a nice batch of new Cal.  
compositae lately, and have  
lots more on hand.

I am to-day slowly and  
carefully, but I guess surely  
getting out the character of  
one more composite genus.  
i.e. Holozonia; the Hemizonia

the plant shall have been ob-  
-tained in flower. All the  
achenes known are culled  
out from among the root-  
leaves, to which they were  
adhering; one could not ~~then~~  
swear positively that ~~they~~  
-belong with the plant -!  
but the inference is a very  
fair one!

In a little parcel which I  
am now sending you is a  
Mojave Mt. Composite which  
you will doubtless find most-  
interesting. With the look  
of Hieracium, & with the  
yellow flowers of that genus,  
it has more of the technicalities  
of Crepis, yet I know no  
Crepis with such achenes  
and pappus; still I guess  
it must go in that genus:  
the old achenes are green, &  
is not their shape strange?

Berkeley, California

Dec. 14, 1881.

My Dear Dr. Gray:

Your notes  
on my proposed new compositae  
were very gladly received some  
time ago.

In the cases of "Madia Pringlei"  
& "Hemizonia Parishii" I had  
myself arrived at the same  
conclusion as yours, i.e. that  
the former is hardly more  
than a var. of M. Bolanderi,  
& the latter scarcely deserving  
a name as a var. of H. pungens.  
Your opinion that my  
Bigelovia glutinosa is a form  
of B. Menziesii I can not  
however, accept. I think  
you must have failed to observe

the one character by which  
it will easily, I doubt not,  
maintain its rank as a species.  
That character is & is sought  
in the scales of the involucre;  
these, in B. Menziesii have flat-  
thin, green herbaceous tips;  
but in B. glutinosa the scale  
at its tip is swollen out into  
the shape of a globular, peduncled  
gland which is filled with  
resin; these glands, shrunken  
and discolored in the dried  
specimen, might be over-  
looked, as to their true char-  
acter — might pass for  
being green-herbaceous; but  
look at them with a good lens,  
and even in the dry you  
will see plainly what I tell  
you. I have not compared  
the flowers yet, microscopically,  
but whether they be found

& differ or not, I think  
you will agree that the  
involucres alone will do &  
depend on, for separating  
the species. There is a  
marked unlikeness in the  
habit of the two. B. glutinosa  
is a very diffuse and  
compact bush, whose  
stems require to be  
gathered in handfuls,  
and afterwards pulled  
apart with care, in order  
to make neat specimens.  
The stems of the other are  
few, and grow up <sup>almost</sup> without  
touching each other.

Of Chœnactis santolinoides I  
sent you the better one of the  
two specimens, so that — what  
you can not find out about  
the corollas from that, will  
have to be waited for until

and I suspect he has  
sent you something else  
for that. At all events  
I enclose herewith a single  
head, taken from the only  
specimen I ever had.

Examine the style tips and  
on the fringe, and the  
central bristles thereof!

I have not even seen any  
of the species which you  
have in this late letter

"preempted". Now that  
you are at home, I shall  
not be likely to be called on  
to name people's collections.  
I suppose the 5 lb parcel  
from Mr. Ball will have  
to come by express; the other  
by registered mail; and I  
will return to you the postage.

As Ever Yours

E. L. Greene.

There go in also two more  
Doronicias!

The big one I at first  
ticketed H. hispida n. sp.  
but in the fruit I could  
find absolutely nothing  
to separate it from H.  
Douglasii: still I am  
not satisfied quite, to let  
it go for Douglasii;  
What do you say?

The white-flowered one, of  
Cleveland's finding, I at  
first took for what we  
had so long sought, i.e.  
H. congesta, but it does  
not at all accord with  
the description of that  
species. The plant is  
not new to me. I obtained  
it myself, at Calistoga,  
very late (October) in 1874.



but do not think I even  
sent you specimens. I knew  
nothing & cared nothing  
about Hemizonia in those  
days. My specimens I  
expect to find among my  
bundles which have been  
in Colorado, stored away since  
1875. The species seems to  
bring into closer juxtaposition  
H. huzulifolia & H. plumosa,  
There is one more undescribed  
Hemizonia in the Acad. Calif.  
collection, very well marked -  
but nearly destroyed by  
insects. I will try to  
borrow it to show to you  
before you finish up these  
things for the Syn. Fl.  
And now, to pass from Hemizonia  
to Gilia - I put in the parcel  
a specimen of what I take to  
be your G. viscidula, and next

to it - a proposed n. sp. so  
very like it - in aspect that  
the two may easily have  
been confounded; but my  
G. heterodoxa, is very distinct  
as you will see by comparing  
the floral leaves & flowers.

The flowers are indeed not those  
of Gilia at all. The long-exserted  
stamens are, in the first place  
not equally inserted, two being  
placed a little lower in the throat  
than the other three, and  
they are as strongly declinate  
as in any species of Polemonium.

In your communication of  
Nov. 23 you say that my  
Senecio Howellii = S. caninus;  
but I wonder how you can  
know that to be so?  
I guess Mr. Howell does not  
himself know his species.

## Postscript.

I forgot all about Holozornia, the most-  
important- thing in the  
parcel. Well, there it is,  
and you can see for yourself  
It could better be Hemizornia  
than Lagophylla but- for  
the fact of its akemes being  
even more entirely and  
closely wrapped up in the  
scale, than are those of true  
Lagophylla. By its very  
unique happens, and its  
remarkable root, ~~with~~ <sup>and</sup>  
its leaves always opposite  
I see not how it can  
fail to be a good genus;  
though if it had the chaff  
of Lagophylla I would be  
for leaving it in that genus,  
I think.

P. L. G.

Berkeley, Cal. Dec. 16, 1881

Dear Dr. Gray:

Your very interesting letter on Echinospermum is at hand. E. pinetorum inhabits the northward slopes, near the very summits of the mountains, growing in the shade of Pseudotsuga and pines - is strictly subalpine: the larger plant E. ursinum is found in gravelly places along streams at the very bases of the mountains. I have both species from Rusby this year, out of the Mogollons. Good specimens of both were distributed, under the above names, in my N. Mex. sets

of last year. Mr. Watson  
admitted E. mussum, but  
was less positive about E. pinctum,  
and I should have printed  
both a year ago but for your  
emphatic word of caution: "I  
shall be crazy &c"; but that  
word kept me on the safe  
side, and all is now correct.

This morning I went across  
the Bay to search for Kellogg's  
E. mussum for you.

I enclose a fragment of what  
I found. None of the specimens  
are anything more than mere  
scraps, just like this one,  
and the ticket bore only the  
name "E. mussum, Kellogg"  
in Bolander's hand writing.

I asked Dr. H. if he could tell  
where the plant came from  
and he said - the Sierra Nevada.

Last year, at New, you gave

your "imprimatur" to  
my Bigelovia rupestris, and  
this year I have found your  
B. spathulata, and consider  
my Arizona plant the same!  
You will come to the study of  
these things, by no doubt,  
than I shall hear what you  
think.

I put a specimen of B. spath-  
ulata, from Kern Co. Cal.,  
in my recent parcel.

Happy Xmas to you  
As ever

Greene



to inspect, and identify  
his plants. When I had  
two or three days to spare I  
went, and did what he  
requested. Most of the species  
were well known to me at-  
sight. A considerable number  
of those apparently undescribed  
had been received by me  
from Mr. Rusby, some weeks  
earlier, and Mr. R. was  
about distributing such under  
my manuscript names.  
Of course, repeated these  
names on the tickets of  
Mr. Lemmon, as I had a  
right to do. There in the  
cases of a few which were  
apparently wholly new  
I gave names.

Now if ~~being~~ called upon  
to identify a collection of  
several hundreds of

Berkeley, Dec. 18, 1881.

My Dear Dr. Gray: I am very  
sorry that your acquaintance  
with Mr. Lemmon is so  
slight, and your under-  
standing of him so imperfect,  
that you suffer anything  
he says to prejudice you  
against me whom you  
have known so long.  
The man seems to me to  
be nervous, and excitable in  
a very unfortunate way, &  
to a degree which leaves  
him sometimes hardly re-  
sponsible for all that he  
says and does.

I so view the case, and therefore  
do not accuse him of

willfully and maliciously lying.  
That "Kellogg, Harford, Moore  
and Harkness are bitter against  
him for continuing to send  
his plants to Cambridge for  
identification", is possibly true;  
nevertheless I do not believe  
a word of it. I have  
never heard any of them  
intimate such a feeling, and  
I can not conceive how they,  
as rational men, could so feel.  
The reasons why a very great  
many of our supposedly new, or  
doubtful species should be  
submitted to Cambridge Botanists  
people, are manifest enough.  
As for myself, I wish to  
assure you that - if such a  
feeling did exist, I should not  
share it.

I have no wish, either, to be  
reckoned among the botanical

authors of this coast.

Of the several acres of w.sh.  
I have published within a  
year, the type specimens (in  
several instances the only ones  
extant) are in your herbar  
at Cambridge. My work  
upon them ~~would~~ <sup>was</sup> interesting  
and instructive to myself;  
but it was chiefly your own  
& Mr. Watson's long absence  
that tempted me to do what  
I have done in that line.

My Senecio Ansellii is I  
think the only species which  
I printed this year without  
waiting for your "imprimatur".  
About Mr. Loomis's recent  
Arizona collection, the truth  
is simply this.

Immediately after his return  
he twice or thrice brought  
me to come to his place

For my three days work on  
Lemmon's plants I received  
not so much as the gift  
of a single specimen for my  
own herbarium. Then when  
I knew that he had sent  
off to you the most interesting  
things - namely, the species  
I had indicated as new -  
(not all of them new by his col-  
lecting,) and that with blank  
tickets, wholly trampling  
under foot all my work,  
I charged him with having  
treated me ill; and I  
confess I wonder that you  
should take a different  
view of the case, if, upon  
a correct understanding of it  
you really do.

Mr. Pringle, knowing my  
acquaintance with the Shasta  
flora, asked me to go through

the bundles he brought  
from there, last August:  
I did so, naming, as he  
wished me to do, the species.  
I found two or three un-  
mistakenly new ones, &  
named them as such;  
but that did by no means  
imply that he should  
henceforth submit his  
collections to me for identi-  
fication. I do not suppose  
that because I know a little  
something about western  
botany, I have the least  
claim upon any collectors.  
You & Mr. Watson being at  
home, I do not expect, or  
ask that any body shall  
be so foolish as to come to  
me.

As for Mr. Lemmon, it will  
be hard to find a collector

or amateur on this coast  
whom he has not heaped  
insults upon; and I will  
positively have nothing more  
to do with him or his plants.  
The thing which I most regret  
in the whole transaction is,  
that you should, by his mis-  
representations, have been  
incited to think so ungener-  
ously of men, whom you have  
known so long. It is not in  
me to be very quarrelsome  
or even obtrusive, I hope.

though I am doubtless sufficiently  
sensitive to ill usage.

I am bound to say, finally, that  
Mr. L. confessed he had done  
me wrong, and more than that,  
that he had done so despitefully.

Did I not long ago ask of you  
that, when you found n. sp. in  
my collections, you would let

plants do as they imply  
the right to do all  
which I did in this  
case, then all the cor-  
respondents I ever had  
~~had~~ <sup>at</sup> Cambridge or St. Louis  
have done wrong.

I have sent to them in  
all, scores of species which  
I took for new, always  
supposing they had a  
right to do with them  
what they pleased.

I had no idea that Mr.  
Leavenworth should withhold  
from you his plants.

I only expected that, in his  
communicating them to  
you he would, at least in  
the cases of the Rusbyan n. sp.,  
communicate the names  
under which I had allowed  
Rusby to be distributing them.



we study them up with you  
and allow my name to be  
joined with yours in the  
publishing of them? And  
you evaded!"

This is why he has taken  
all these pains, first to scrub  
me, and then to injure  
me in your estimation.

Well; enough of all this absurd  
nonsense.

I have written much to you  
lately, and am very sorry to  
have been compelled to go, for  
now, so far out of the way  
of pleasant correspondence.

As Ever Sincerely Yours

Edw. L. Greene.

Compare the akenes, now  
known that one has white,  
the other yellow rays; and  
one a camphor-like fragrance  
the other an ill. odor.  
I could not possibly, with  
any mind or conscience, if  
any one follows your suggestion  
about modifying the  
character, and including  
both under one name.  
You will see that I am  
correct when you come to  
a critical study of the genus  
again, I have no doubt.  
All the heads of *Bigelovia*  
*Menziesii* which you so  
kindly enclose have this  
acute, green-lutaceous  
scale tips, of which there is  
no trace in any *B. glutinosa*.  
Still, I leave the thing, for  
the present, in your hands.

Berkeley, California

Jan. 19. 1882.

My Dear Dr. Gray:

Immediately  
after Xmas I went into New  
Mexico for three weeks, and  
have but just returned; so  
your letters were not seen until  
within a few days.

The bundles from Mr. Ball  
were also found in the  
post-office awaiting me.  
You were very considerate,  
and deserve thanks for the  
trouble you took to have  
the parcels divided and  
tied up anew in size for  
the mails. Some dollars  
have thereby been saved.  
I enclose the postage herewith.  
As for Mr. Lemmon, he told

one he had sent you only  
a part of the m. sp. and  
that the rest was in  
waiting. I hope he has sent  
all to you before now.

About the names, it does  
not matter. I shall print  
no more of the Rusbyi.

I want without first sending  
specimens to you; and then  
if we find that you have,  
through Linné, got ahead  
of me in some of them, I  
shall be content.

My Pentstemon princiflorus, which  
you ask about, was first collected  
by myself, and was published  
in the Bot. Gaz, early in 1881.  
You saw my specimen in the  
lot I sent to Rev. I found  
also my P. pauciflorus in  
Linné's Arizona Collection.  
That was published at the  
same time with the other.

About Linné's Rusbyi;—

I have now the evidence  
that at least since Hall &  
Harlow's day, you have  
been putting 2 distinct  
species under that name;  
one with very large heads &  
thick but narrow and margi-  
nal scales, and another  
with smaller heads and  
broad scarious-margined  
scale. Which is the  
original S. Bigelowii I can't  
tell. But let, after all the  
press my S. Rusbyi should  
turn out to be it, I have  
telegraphed Mr. Grand,  
(I fear too late) to withhold  
it.

Your putting together of  
my Hemizonia spicata, &  
the big H. hispida will  
survive! You did not

Concerning Mr. Pringle;

Harbor region plants I wish to say that, at the time I was going through them and writing down the names, you were in Europe, and I did understand that you were expected back for many months.

In view of this, and the fact of Mr. Pringle's expressed wish that I should go through and give the names, I did not think of such a thing as a possibility of trespassing, when I named, and a little later printed in or two any clear n. sh.

I did not see Mr. Pringle after his return from Oregon; but Dr. Parry says he expressed himself highly gratified at what I



had done.

I do not mean to annoy  
you with long letters.

But some things have to be  
said.

As always, Yours Truly  
Chas. L. Brown

John Kew by your  
instruction. I have been  
presented with no bills  
for their carriage from  
Kew to Cambridge!

Do you get such things  
carried free? If not -  
I must be presented & bear  
my share of these freight-  
bills!

As Always Yours &c  
Edw. L. Greene

S. S. "Crepis erythraepurpurea"  
we will then call H.  
brevipilum; and I have  
from the same collector another  
much like it in aspect, but  
with very different akerns &  
pappus, which I call.

Berkeley, California  
Feb. 6. 1882.

My Dear Dr. Gray:  
Your letter  
of Jan. 28, enclosing a  
check from Mr. Watson on  
Dr. Cooper's account, and  
also a list of n. sp. you are  
about to publish, has just  
come in.  
There was no need of your  
taking the trouble to write  
out that list; for none of the  
plants are in my possession.  
It is not at all probable that  
I shall be publishing more,  
for the present, unless I  
should pick up now and  
then a new thing in my

rambles over these well-  
travelled Californian hills  
and valleys. I have no  
idea that even the Parish  
Bro's will send me any more  
unexamined specimens. What  
they did before was done because  
you were not available at  
the time. Trust me then  
to send you in due season,  
a representation of anything  
I may intend to publish,  
if there should be such things,  
and in your overworked  
condition, to save the labor  
of telling me. Really I  
almost feel an unintended  
rebuke in this long list of  
yours!

As for Sarcis Humilis  
which Mr. Small tells me  
both you and Mr. Watson

call S. Caninus, var. I am  
very sure I am  
correct. He has sent  
me more specimens, by  
which I am convinced  
he knows what I mean  
by S. Humilis, and has sent  
you the right thing.  
It is very far from S.  
Caninus, and very near  
the rare & peculiar S. Greenei.  
You will, some day, look  
at the characters I have  
pointed out in my  
description, and will  
confirm my view.  
I have received, within a  
year, through your kindness  
one lb. of plants from Dr.  
Reck, and another from  
John Ball, all forwarded

H. Rusby, I will  
send you a specimen of  
this, and a few other things  
pretty soon.  
E. L. G.



of the best of all species  
- a salt marsh shrub -  
stem several inches thick  
and bushes 3-4 feet high;  
and I have what I take  
for a good n. sp. from  
Rusby, collected in the  
higher Magdalena.

As Ever yours

E. L. Green.

Berkeley, Feb. 15, 1882.

My Dear Dr. Gray: I have  
found among Rusby's relics  
two more n. sp. specimens  
of which I send registered  
herewith.

I have never seen Collomia  
Caranilleiriana, but the  
proposed C. Rusbyi, with  
its 1-celled (!) cells can  
not be it. In aspect  
it is very like C. Humberti  
to which species I carelessly  
referred it when I first  
glanced at it; but it  
has excellent characters of

Flower as well as fruit.

This Hieracium Rusbyi does not bother me with a white paprus; But I am wondering if you will finally leave my H. carneum (described on page 184 of Bot. Gazette for 1881) to stand, or if you will deem it necessary to transfer it to Crepis. In view of the <sup>occasionally</sup> white paprus in H. Fendleri, H. Scouleri + H. brevifolium, I am more than ever inclined to not satisfy with what was my first impression.

Madia atriodora I guess you will find already with you. I did not distribute any nice specimens of it, in

1876, for the reason that I had no name to go with it.

It has pretty thick and short stems for a Madia, and they are not perfectly enclosed in the scales; but the habit is so perfectly that of Madia that into that genus it must go, I doubt not.

The herbage is delightfully lemon-scented when fresh.

I wish to help you some on Grindelia by and by, but I must make even more specimens; after which I will be able to help you solve a problem or two, I guess. G. curcufolia e.g. is one of

Berkeley, California

March 8, 1882.

Dear Dr. Gray:

Your letter of  
27. Feb. is just in.

So my "Collomia Rusbyi" is  
not new to you! Well,  
after all you have so kindly  
written about it, I shall  
not dare do more about it,  
but leave it for you to settle  
when you revise Polymeria.  
I am glad to have you say  
that Collomia must go.

I have been of that opinion  
for some time.

In reply to what you ask  
about the validity of some  
of the "book species" of Madia.

I would say that in my  
opinion M. dissitiflora, F. & G.  
is not only a good species,  
but perhaps the only one of  
the reputed "forms" of M.  
sativa, which is indigenous  
to California! I have never  
seen real M. sativa (that  
which = the Chilean plant)  
growing anywhere but in  
fields cultivated, or by roadsides.  
It has wholly the manners of  
a foreigner, however abundant  
it is. But away among  
the hills, in the woods, and  
canyons M. dissitiflora alone  
is found, and it occurs  
never where the other forms  
grow! This will sound  
a novel idea to you, but I  
believe it is the truth.  
I am greatly obliged for

the fragments of Hemizonia  
angusta. I have not  
yet had time to compare  
them with the proposed  
H. Clevelandi.  
Yes, it might be well for  
you to lend me, as you  
offer to do, your M. S. of  
Grindelia. I could return  
it soon.

Very Truly Yours,  
Edw. L. Greene.



Berkeley, 15 March, 1882

My Dear Mr. Watson;

Long ago  
you asked me to try to find  
the specimen whereon Dr.  
Kellogg based his Psoralea  
fruticosa.

Well, here you have some  
fragments of what is undoubtedly  
the thing, though there was  
no name attached, save  
"Psoralea n. sp. ?"

I came upon it unexpectedly  
to day, in the midst of a  
bundle of miscellanies which  
had been thrust away in  
an obscure nook of the

Cal. Acad. Herbarium.

The species, you will see,  
is an excellent one.

These about-flowering branch-  
lets are densely axillated on  
all the branches!

It looks more like some  
foreigner than any ~~species~~  
American species of the  
genus.

Very Sincerely Yours  
Edu. L. Greene.

Berkeley, 20 March, 1882

Dear Dr. Gray:

Here I come  
with still one more new  
turnweed!

Hemizonia frumontii and  
H. pauciflora are still to me  
unknown; but this can not  
be either of those.

Notice the tendency to have  
the few leaves opposite.

I found the specimens in  
a bundle of various scraps  
collected by a lady, not very  
known where or when; said  
bundle having been thrust  
away, with much rubbish,

in an out of the way case  
in the Cal. Acad. rooms.

The Aplopappus was in  
another bundle in the same  
obscure place. There is but  
a single, poor specimen, but  
even the unetched fragment  
I enclose for you is enough  
to show a well marked  
new species, Dr. Kellogg  
had named it - "A. Nuttallii".  
As Ever Yours  
E. L. Greene.



1882,  
Berkeley, Cal. April 25

My Dear Dr. Gray: Are these  
the specimens of Micoseris  
Douglasii?

I obtained specimens last  
season, and distributed  
them, inadvertently, as  
"M. Bigelovii" to which  
species I now see it can  
not belong.

It agrees pretty well with  
the description of M. Dou-  
-glasii, and I wish you  
would tell me, by a post  
card, if I am correct  
in so calling it,

It is not rare at  
Berkeley, and  
grows with M. aptera  
to carpha.

Your last letter is yet  
to be answered; but I  
will not trouble you

further just now.  
I am now trying to get  
"the hang" of the genus  
Luzia. No jizzles  
can yet. The species  
seem clear, so far as  
I know them.

It ought to be noted, in  
the books, that the Luzia  
are spring animals, &  
the Hemizonia autumnal.

Yours as ever  
Greene.

~~Microgaster~~ Microsporus. I have  
Commissioned students  
who dwell at Martinez & search  
for it there, and have en-  
closed in my small  
registered package, what they  
have brought, i.e. what seems  
to me only the common, old  
species; but on the necessary  
grounds here I get what  
I am sure is a second  
species, though it is  
apparently your "var. subos-  
titus" of the Bot. Cal.  
Every week I am more & more  
impressed with how very much  
is yet to be learned about  
Californian weeds!

I have got Pentachata apilis now  
with rose-red rays! I forgot  
& put it into this sending,  
but you shall see it some day.  
As ever, S. L. Graham.

Berkeley, May 12, 1882.

My Dear Dr. Gray: Your recent  
letter, most valuable, with  
its enclosure of an akenes of  
Microseris Douglasii, came  
in yesterday. I thought  
from the description, that  
its akenes might be such  
long and attenuated things  
as those I sent you two  
weeks since. But since  
then, I have found another  
species which seemed as if  
it might possibly be that,  
~~species~~, though the scales are  
but sparingly, villous. But-

in the light of this authentic  
where I perceive both  
my plants to be new.

I am sorry not to have  
found M. cyclocarpa, about  
which I still know nothing  
but what the description &  
figure tell. The one I call  
M. melanocarpa n. sp. I  
did, at first, think might  
be it; but when its achenes  
got mature, and showed the  
peculiar folding, & color of  
the scales I saw that if  
it could not be <sup>a smooth-scaled form of</sup> M. Douglasii  
it must be another new one.

It will not be strange if yet  
many more n. sp. turn  
up in this section Eucalais.  
For the season during which  
they are to be collected is very

short. It is only about two  
months since I began  
to find them, and now,  
everywhere, they are dead  
& their matured achenes  
all scattered to the winds.

Both my proposed new  
ones were to have been  
gathered by the thousands  
on the university grounds  
a week ago, but I have  
not seen either one anywhere  
else in all the country  
round!!!

I send you specimens of all  
I have been able to detect  
in this group of the genus.  
M. Bigelovii is variable as to  
its scales, and so is M. melan-  
-carpa.

Weeks ago you wrote about



Berkeley, May 23. 1882.

My Dear Dr. Gray: I hardly  
expect this proposed new  
Pentastachya will be quite new  
to you; for it is common  
enough on these hills; but it  
certainly falls under none  
of the forms described, and  
is in habit, + in its constant  
character of 5 or 6 flowers  
slender akenes, + 3-awned  
gappus, so unlike any  
forms I have seen of P. exilis  
that I can not accept  
it as less than a distinct  
species. What do you  
think?  
I enclose with it the

promised specimen of red-  
-rayed P. pilis.

I have, this week, been wrestling  
with Convolvulus. The most-  
common species about S. F. Bay  
is not described in the books of  
Cal. Bot., nor even mentioned.

When I sent it you from  
Vallejo, 8 years ago, you called  
it C. Californicus Choisy, which  
it certainly can not be, & I  
guess it is C. arvensis.

You will, I guess, be surprised  
when I tell you that your  
C. occidentalis is an evergreen  
shrub, climbing over trees  
& the height of 20 + 30 feet,  
and having its woody stems  
as thick as your finger!

Yours as always

Edw. L. Greene.

as to lengths of akenes, I do find the matter of the smoothness or hairiness of the outer akenes very constant. So if this smooth outer akenes, can be verified as an outer one, I think the validity of M. cyclocarpa (which would have a bad name, on account of the folded scale) could safely be rested on its villous outer akenes. M. attenuata, viewed in the light of what is here suggested will, I doubt not, hold well its claim to specific rank. There is great variability in the size, & some in the shape of the scales; some also in the akenes, but the outer akenes are always precisely like the inner, none of them being even slightly villous. I should never think of its running into Bigelovii. That has always flat, brown scales. Those of M. attenuata

Berkeley, California  
June 3, 1882.

My Dear Dr. Gray; Your very

full and richly instructive communication of the 23<sup>d</sup> ult. has just arrived, and with it a card asking if I have got printed my "Viguiera flexuosa." As to the latter, you wrote me that Mr. Wright's specimens were not flexuose; so I called it V. Parishii and published it in the Bull. Torr. Club in February last.

You ask why I changed the specific name of one of the Hieracia. I answer; first, because you said in regard to the name erythrocarpum, that Mr. Wright's specimens of the species had not red akenes, and also that H. Grayii had occasionally red akenes. I also observed

this, in the second specimen  
received from Mr. Purdy the seeds  
were nearly black. I did not know  
that Mr. Pringle had printed  
the name, or I should have  
retained it. I wonder he did  
not show me what he had done,  
by sending me a catalogue: or  
whether else he printed.

As for "brevipilum", I can not see  
wherein the name is objectionable;  
for a pilus may be long or short,  
and in this species ~~the~~ which has  
a good deal of the look of H. longipilum  
the pilose hairs are very much  
shorter. In such a genus as  
this, adjective names not already  
used are hard to find; and, deeming  
brevipilum as good latin as longipilum  
and considering the two species would  
be compared with, one another, I  
thought. I did well with the name.

I thank you very much for  
these many Miconia akemes, and  
the thing which I am specially  
glad to see is an authentic one  
of M. cyclocarpa. At the first-  
view of it I yield up my proposed  
M. melanocarpa. The pappus  
scales are very wrongly represented  
in the figure. They appear thin  
to be flat, or spreading, whereas  
the two sides are so folded as to  
form a boat-shaped dish.  
That all this is referable to M.  
Douglasii I shall doubt, unless  
you tell me you were wrong in  
calling this good akeme of M.  
Douglasii which you sent me  
an "outer" one. (I return it  
herewith, in compliance with  
your request.) However  
great the variability of these  
plants as regards the shape  
& allony of the scales, & even



are always white, <sup>have</sup> ~~+~~ always  
their sides rolled, or folded in  
towards the midrib in the  
manner of M. cyclocephala or  
Drylasia.

From what I have said about the  
apparent stability of the character  
of smooth or hairy outer surfaces,  
you will understand that, glad  
as I am to have seen these  
isolated ones from the Hb. Hook. &  
Hb. Brit., they are not very helpful.  
I will look at the Microspora affair  
next week, and will then write  
again.

I must now tell you that I have  
found in the Cal. & East Herb.  
a fifth Raillardella i.e. R.  
Eisenii, Kellogg in herb. with  
rather conspicuous rays.

I shall send you a specimen  
of it by & by.

As ever yours, D. L. Greene.

is a small one, I saw  
across of it last year  
growing 3 feet high.

I also put in a specimen  
of Kellogg's unpublished  
and probably long forgotten  
Raillardella Liscumii; also  
a fragment of a Hulsea  
which I can not identify;  
but I know too little about  
that genus.

I also found lately, between  
the leaves of a book in the  
Acad Library a Saxifraga  
with the following pencilled  
in Kellogg's Chirography on  
the margin of the page:  
"Saxifraga Parryi, from  
Santa Rosa Island."

The specimen looks as if it  
could be 20 or 30 years old,  
but it is far from being

Berkeley, Calif.  
30th June 1882

Dear Dr. Gray:-

W. L. Lathrop As a mine  
of Hemizonia, the many  
bundles of the Cal. Acad. Herb.  
are panning out well; and  
I register to you, to-day, ~~one~~  
among other things, one  
precious fragment from  
the old Blomquist Herbarium,  
where exists the only specimen  
apparently, but that a good  
one, of a species very closely  
akin to H. Hermannii -  
precisely like it in foliage,  
pubescence and habit, -

but differing in its very  
few flowered heads (3 ray, +  
3 disk flowers) and its more  
slender, transversely ovate  
ray akenes. No one, I am  
sure will question the  
validity of the species.  
To save you, if possible, the  
trouble of digging out akenes  
of both, I enclose some of  
both herein.

The proposed H. Kelloggii I  
suspect you have already  
on hand. It is abundant  
in the San Joaquin Valley,  
in fact the commonest  
termed there, and it may  
have gone into H. fasciculata  
when Kellogg has placed it  
in the Herb. Cal. Acad.

The difference in habit,  
though noticeably enough

could be passed by; and in  
the char. of disk akenes,  
+ pappus I find no difference  
at all; but when you come  
to ray-akenes, then appear  
differences which must  
be of specific importance.  
You will see at a glance  
under a strong lens that,  
~~apart~~ apart from the  
great difference in size  
and rigidity, that of H. Kelloggii  
has a very prominent and  
crooked brake, and almost  
no stipe at base, while  
H. fasciculata <sup>has</sup> a stipe almost  
as prominent and as crooked  
as the brake of the other, while  
its own brake is compar-  
tively straight and incon-  
-spicuous.

The specimen of H. Kelloggii

S. Parryi; so much I  
am sure of, though I  
have never seen that  
species. This has a  
long, deep, woody-fibrous  
root; two short-petioled,  
mallow-like leaves, and  
a scape a foot high  
bearing a cymose panicle  
of 11 flowers. The one  
flower which I soaked  
out and examined I  
send to you, and beg you,  
if it be not too much  
trouble, to send me one  
flower of S. Parryi.

I will send you a correct-  
outline of the whole  
specimen of S. malvaefolia  
before I print it.

As ever yours

Edw. L. Greene.



Berkeley, July 6. 1882.

My Dear Dr. Gray:- I have never  
seen any specimens of your  
genus Clappia, but from  
the description in Benth &  
Hook. I judge this plant  
enclosed to be referable thereto.  
If so it will apparently well  
establish the relationship of the  
genus to Lagetes.

The single head which I have  
dissected I venture to say  
you ought to keep, if the  
thing is as interesting to  
you as I suppose it will be.  
One other head, with the

like two or three inches  
of stem is all that we  
have.

There is nothing on Mr.  
Gorrie's ticket to indicate  
from what part of the  
peninsula the plant is  
derived, nor can Dr. Kellogg  
give any opinion.

As ever yours  
O. L. Greene.

these corollas, in disk as well  
as ray are too widely different  
from those of Pentachæta that  
they can not be admitted in  
that genus, even on the linear  
theory. Hence Aphantaephæta  
exilis, Gray must be restored;  
and I am glad to see that  
Benth. & Hook. never questioned  
its validity. Did you not  
observe that the rays are deep  
red-purple? And are not  
in your specimens, the disk  
flowers (filiform, truncated things  
with mere denticulations instead  
of divisions) white?

The disk corollas are even the  
best generic character which  
the thing possesses; decidedly  
more unlike Pentachæta  
disk flowers, than the rays  
are unlike Pentachæta rays;

Berkeley, July 17, 1852.

My Dear Dr. Gray:— In your  
letter of June. 2<sup>d</sup> you expressed  
a doubt as to the validity of my  
proposed Pentachæta alsinoides,  
and I suspect that, in the  
hurry of botanical work in  
which you must be perpetually  
overwhelmed, you neglected to  
compare its akenes with those  
of other Pentachætæ. All I have  
need to say is, compare them  
and you will no longer doubt.  
I have lately come upon a  
fine "cache" of Pentachæta speci-  
mens (collected by various people)  
in the Cal. Acad. and the  
occurrence there of deformed  
forms of P. alsinoides, retaining

in every instance perfectly all  
the specific characters, is not  
the end of the business.

Although you say that the plant  
"on which Aphanochaeta was founded  
has as yet been detected only in Dr.  
Bigelow's specimens from Napa Valley".  
I find plenty of it in the Herb.

Cal. Acad. from different parts  
of the country, by several  
collectors. Now, if Bigelow's  
specimens, (which are all you  
appear to have seen) are so fair  
as the figure in the B. R. Report  
indicates, I marvel greatly  
that you should ever have  
receded from your first  
position, i.e. that the plant is  
generically different from

Pentastochaeta. It appears that  
in the Bot. Cal. revision you  
must have adopted the theory

that - the peculiar ray corollas  
are a mere usus, an opinion  
which I venture to say is not  
possible to be maintained. The  
plant has a pubescence of its  
own + ~~some~~ <sup>some</sup> of the other forms  
show ~~white woolly~~ white-woolly  
hairs, such as an conspicuous  
under a lens, in this plant;  
particularly toward the base  
of the involucre; and the  
color of its akenes is  
reddish-brown while in  
all other forms it is clear  
white, so having frappus  
and corollas all out of the  
question, by its pubescence,  
color of akenes, + shape of  
involucre, Aphanochaeta is  
a species. But this admission  
destroys the theory of its corollas  
being a varietal sport; and



for the transition from ligulate  
& tubular <sup>says</sup> is not so abrupt, as to  
speak, as that from deeply lobed  
yellow disk flowers, to truncate  
white ones.

So I can not conceive of any very  
great difficulty but this:

Sphaerocata epilix, Gray

+

Pentachata aurea, Nutt

P. epilix, Gray (which should be  
P. Bigelovii, if the law  
will allow) distinguished  
mainly by hemispherical involucre  
+ numerous, nate, densely  
white-yellow akenes with 5-tristled  
pappus, and including  
var. discoidea, Gray +  
var. epapposa, Greene, if these  
accidently deserve varietal names

+

P. alsinoides, Greene, with  
narrowly turbinate involucre, +  
few slender fusiform, or prismatic  
akenes, with very sparse and short  
villosty, and 3-tristled pappus;  
the latter reduced or wanting in marginal  
flowers.

Do not think me crazy! sometimes I guess you will,  
after looking again carefully into the affair.  
find me pretty nearly correct. S.D.G.  
as far as

Linum Clelandi, There is  
but one specimen, and of that  
I send you the better half.

Hosackia <sup>velutina</sup> ~~velutina~~, appears to  
be much like some forms of  
H. rigida, to which it is certainly  
most related, though distinct  
enough.

Hemizonia Clelandi, I sent  
it to you thus named, a year  
ago. It differs from H. lugulifolia  
only as to pubescence and  
general character of inflorescence,  
that is to say, it is setose-hirsute  
(not villous) and its heads  
are succrose (not corymbose)  
and those differences must  
abundantly suffice.

Hemizonia oppositifolia, differs  
from H. cephalotes, (for specific  
rank I am well persuaded must  
be conceded to that also) in

Berkeley, July 19, 1882.  
Dear Dr. Gray:-

I have just received  
your favor of the 10th inst.

Thanks for Saxifraga Parryi; but  
I wait a few days before good flowering  
ones from Parry. Leaves I can not  
get; but it does not matter.

One peculiarity of S. malvaefolia, as  
differing S. Parryi is, that its  
leaves appear with the flowers;  
but notwithstanding that, and its  
fibrous root, and its much greater  
size, its flowers differ from  
those of S. Parryi chiefly in having  
a shorter, much broader, and  
less deeply toothed calyx.

Your patience with me on the  
Hemizonia questions will, I  
fear be nearly exhausted, by the  
time you have seen my H.  
oppositifolia, and <sup>read my</sup> proposal about a

H. cephalotes, the last of which  
you must have known nearly all  
your life. None the less, my  
conviction is firm that, a species  
it is, even though the eye detects no  
characters but that of habit and  
mode of flowering. But all these,  
you know, are heavy-scented  
plants, and a blind man will  
easily distinguish H. multiglandulosa  
from H. cephalotes, the last yields  
a grateful fragrance & the other  
a disgusting odor. H. oppositifolia, I  
have not had in the fresh, but it  
is nearly glandless, & perhaps as nearly  
scentless, though more likely not.  
Its white or pink rays change to  
non-purple. I send you two little  
specimens; but the large & perfect one  
left has all the characters of the  
small ones; even the last heads at  
the tips of the branches being like all the  
rest. opposite. Yours, as was, E. L. Greene.

Helianthella Clevelandi. has its  
pappus reduced to two mere rudiments  
of awns, and even these sometimes  
hardly perceptible.

Astragalus melilotoides. I send  
you all - the only specimen -  
darning your herbarium the  
best place for it, and trusting for  
more to be found. I have drawn up  
my description, before sending the  
plant out of my sight.

Senecio Clevelandi. The glaucous  
herbage, and perfectly entire  
leaves forbid our referring this  
& the polymorphous S. lugens.  
Indeed the plant strikes me as  
being more akin to S. communis.

Antirrhinum crassicaule, I have,  
of course, never seen your A.  
virga, & which this must be  
related; but it far from  
answering to the description of  
that species.

the strictly opposite leaves  
branches & heads, slender habit,  
and almost-total absence  
of glands.

Gilia Buckminstersi, one, out  
of a half dozen fine n. sh.  
from "Patagonian Mts",  
among them an annual  
Chamaesaracha, two feet-  
high, (C. physaloides, I call  
it) with the aspect of Physalis,  
but wholly the char. of your  
new genus. His things  
are mostly in fragments,  
and so few that I can  
hardly get away to send you.  
This is all I will send now;  
but there is plenty more for  
me to trouble you with from  
time to time.

P. L. G.



I am now nearly secured out  
of my profound H. Kelloggii.

By the arrival from Parish, of  
the same thing named

"H. ramosissima," & therefore  
most likely so named by you.

It is certainly not what I had  
been taught to call H. ramosissima,  
being much more like H. fasciculata,  
and from which, in the light

of quite a nice series of specimens  
I have lately accumulated, I begin  
to think it may not be, after  
all, distinct.

Perhaps, if I go with the  
surveyors I shall give you  
an interval of repose!

As ever yours

Edw. L. Greene.

Berkeley, July 20, 1882.

My Dear Dr. Gray:-

When, in a  
recent letter, you remarked  
that you hoped I would go with  
the Mr. Shasta surveying party  
I knew not what was meant;  
but a communication just in  
from Mr. Largent gives the  
explanation. I shall, I  
believe, go and remain with  
the party for a month or  
two. I can not find it  
in me to thrust aside the  
opportunity for seeing more  
of that region, and especially  
the land unknown which lies  
"between Mt. Shasta & the coast."  
Many thanks to you for  
recommending me to the  
appointment.

You are too generous, when  
you transfer my mistake to  
your Verbesina scrota. I  
have never studied Verbesina, but  
I thought I did know Encelia.  
I perceive that I did not  
answer your questions about  
Cercolonic, some of them you  
will, I trust, see answered  
by me in next Bot. Gazette.

As for ~~C.~~ C. Californicus  
"sometimes growing tall," I should  
say no; though I have seen it,  
after flowering season, continue  
growing, and twining a foot or more  
high, on the grasses, but these  
later-growing stems always  
sterile. I have seen about  
the same thing in C. spithameus  
in Wisconsin.

The stigmas of C. occidentalis  
are not pressed out of shape.

They are thicker when fresh,  
but not narrower or shorter.

One more word about  
Hemizonias.

The little slender thing I saw  
you long since ticketed H.  
gracilis n. sp. passes by nice  
gradations not into H. multigland.  
ulosa as you suggested, but into  
H. Douglasii. I have found  
many more specimens in the  
old herbarium since the hour  
when I first alighted upon it.  
By the way, all of it, in the  
herbarium is named H.  
multiglandulosa, which I  
easily distinguish from Douglasii  
by the simple habit and  
nearly sessile heads, and yellow  
rays. The pubescence goes  
for naught. H. Douglasii is  
just nearly as smooth as  
H. truncata.

affairs parochial will I fear  
prevent my carrying out  
what I at first resolved upon.  
Things may be I can get  
away for three weeks by & by.

Very Truly Yours

Edw. L. Greene.

Berkeley, Cal. 1<sup>st</sup> Aug. 1882.

My Dear Dr. Gray:-

Several days ago  
there came your little parcel  
containing Astragalus, Rattaii &  
Gelaspia Californicum, both of  
which are quite new to me. I  
do not know Rattaii; have not  
even seen him. I am much  
obliged for the specimens.

Yesterday came your note  
replying to my suggestion about  
Asphantochoata. I have, within  
a week, written out the descrip-  
tion of my Pentachota alsinoides  
and sent it to press, with a lot  
of other compositae. When I came  
to a microscopic examination  
of its corollas, I found them  
excellently characteristic.

They are, of course, very slender, and much less deeply cleft than those of the various forms of which I allow to be Pexilis, and, they are yellow, as in all Pentactotae (except those of the way in Pexilis which are I believe never at all yellowish save in old herb. specimens). Those of Aphentactotae are white (of the way, red-purple).

In my latest study of Encalais, the conclusion of which was, the description of my M. attenuata as a most clear species (very much more unquestionable than even your M. platycarpa & M. cyclocarpa, in my opinion), I detected an unexpected subgeneric character which, but for its failing in the case of M. Bigelovii would seem to demand the restoration of the genus Calais.

(unless I am incorrect as to my notion of the history of these names) at all events, each species of Encalais except M. Bigelovii has a convolute reticulation of papery scales. But in that as in Calocalais they are imbricate. Did not the habit of M. Bigelovii preclude its admission to Calocalais, I should say, that we have here a loud call for a readjustment - or a rearrangement - quite other than that of Benth & Hook. & yourself. But as it is I don't know; though I want you to notice this fact & see what you will make of it.

I greatly fear I can not go on the survey, after all; some.



will perhaps wonder that  
I should hesitate about  
accepting it. I <sup>take it,</sup> may ~~take it,~~

Sincerely Yours  
E. L. Greene.

Berkeley. Aug. 16. 1882,

Dear Dr. Gray,

Your letter of  
the 8<sup>th</sup> is just come.  
All which I have done to  
do in Hemigenia, or  
about what I did last year,  
you will see in the For. Bull.  
for Sept. The same, as to  
Microseris. I did not dare  
print the M. melanocarpa  
after I had seen all of that  
which you called M. Douglasii;  
but the validity of M. attenuata  
is far beyond all question.  
From my view of Aphanocephala  
expressed to you some time ago,  
I have warned since, in so far  
as to have distributed specimens  
to correspondents (along with

P. alsinoides, (Gruen) as P. Pappantocha-  
-ta, Gruen; but that is not  
satisfactory to my mind yet.  
The old trouble stares me in the  
face, i.e., that while the  
brown-cilium akenes forbid its  
being a var. of P. efflis, but  
give it specific rank, the  
corollas expel it from Pentactata  
altogether. It is the worst  
puzzle I know of in the whole  
circle of my acquaintance; & to-day  
the restoration of Pappantocha-  
ta seems, to me, the nearest  
approach to a satisfactory  
solution.

You will be reminded, while  
among the tarred bundles,  
of my proposed Holozonia  
of a year ago. You will  
look at it thoroughly, I predict,  
and accept it as a very clear

generic type. I have  
recently obtained more of  
it, and have detected still  
another strong character  
which escaped my notice  
last year, i.e. the pappus  
of the disk flowers (!),  
consisting of a pair of very  
long & slender, wholly  
deciduous bristles!  
This, & the cupulate ditto. of  
the ray akenes, drive it  
aside of Lagophylla not to  
speak of the more than  
twice as many flowers to  
the head (all white) (in  
Lagophylla all yellow), and  
the wholly united chaff; &  
the perennial root.  
I am offered the chair  
of Instructor in Botany at  
the University; and you

Conf. to my mind

why put together any white or  
rose-tinted H. spicata & sulphur  
yellow H. hispida? And yet  
again my white changing to  
rose-purple H. oppositifolia and  
yellow H. gracilis. For the  
sake of consistency put H. spicata  
and H. oppositifolia into H. multiglandulosa  
if they are not to stand by themselves!  
But this Calycadnum problem will  
I think easily solve itself if you  
can be persuaded to give up your  
tenacious clinging to ubereus &  
pappus, and seize hold of the  
well marked differences of habit,  
and of chemical properties as indi-  
cated by the odor of the herbage,  
(which latter character one of the  
very best, is not at all available  
with you; but you must not  
ignore it. It is the character by  
which the botanists of the future

Berkeley, Aug. 24, 1882.

My Dear Dr. Gray:-

Your letter -  
about Hemizonia has just ar-  
rived. Some of your enche-  
rises greatly surprise me, and  
none more than your disposal of  
H. Lobbi, which I consider as un-  
questionable a species as the genus  
holds; and I too, have reached my opinion  
not without having at hand a vast  
amount of material of the fasciculata-  
ramosissima sort, gathered in from  
many localities. You have evidently  
been misled, first, by the mere portion  
of a branch, as to the size and general  
aspect of the plant. Had you seen  
the specimen, a plant two feet high  
simple up to the middle, then abruptly  
parted into a half dozen equal,  
virgate-racemose branches, you

would, at the very first glance, have  
relegated it to the virgata group.  
You would, on looking closer, have  
noticed the dense, appressed foliage of  
the floral branchlets, such as occurs only  
in H. virgata & H. Hermannii.

Then, going to the chaff of the receptacle  
you would have found it distinct,  
each pale half enclosing a sterile akene,  
(the good character of that group) like  
which there is nothing in the fasciculata  
neighborhood. So you might have  
thought, perhaps, of making it a  
few-flowered var of H. Hermannii,  
but the exactly 3-ray. & 3 disk-flowers,  
the different shape of the ray-akenes  
& the pappus of the disk, make it  
clearly distinct.

It looks to me that in this instance  
as in Bot. Cal. when you left the  
beautifully distinct H. Parryi in  
with H. Fitchii, & the very clear

H. Hermannii, in with  
H. virgata, you have slighted  
things which deserve closer looking into.  
For H. Lobbi you must, indeed  
take heed for its size & general  
aspect, but - for the leafy branchlets  
(a char. no trifle, but a good  
char of virgata group) and the  
peculiarity of receptacle-chaff, you  
can see for yourself. if you will  
look, and compare with Hermannii.

In your disposal of Calyculidemia you  
appear to me strangely incon-  
sistent with yourself. Why do  
you keep H. Douglasii, & H.  
multiglandulosa apart?

Your sole character, so far as I  
can see is color of flowers.  
No distinctions of akenes & pappus  
can be found. But if you  
keep them apart on that ground



will be led in threading this  
whole calycadenia maze.)

You, I humbly believe, will  
either accept this suggestion  
and, taking the word of Californ-  
ians for good, act upon it,  
or your work on the subject  
will be undone, before your  
volume shall have become at  
all antiquated.

But even with color & flowers  
and habit, you can certainly  
do better than, according to your  
letter, you have determined on  
doing.

H. tinella, H. spicata, H. oppositifolia,  
H. multiglandulosa, + H. cephalota,  
are all white or rose-tinted.

If you can not recognize differences  
of habit, put the four into one.

But a Californian school master  
might teach children to distinguish

each of the four, blindfold, by  
odor of herbage alone!

I have told you this important  
fact before, but you ignore it,  
because, I suppose, you can not by  
your own experience verify it.  
I am so perfectly confident that, in  
the two points here insisted on, I  
have the key to the enigma, that  
I publish in Lett. Gen. Bull.

H. cephalotes, whose flowers are of  
the same color as of H. multiglandulosa,  
but whose habit + odor are very  
widely different.

So securely do I trust in these points  
that I doubt if, in H. Clevelandii's  
description I have mentioned  
that its rays are only half as long  
as those of H. lyguleifolia. Though  
I guess I did mention the  
peculiar unfolding of the ray-anes  
by the scales, which justifies an

There are good technical  
distinctions. Even without  
that I could trust it to  
stand on the difference in  
habit, pubescence & odor.

*H. lugulafolia* is of such a  
sickening, filthy odor, that  
I dread experimenting with it,  
when fresh; but *H. Clevelandi*  
is rather pleasantly aromatic.

I know not to what purpose  
I write all this, long protest.

But my faith in every one  
of my species of this genus,  
grows stronger every day, es-  
pecially now, when their needs  
are in their prime on our  
plains & hillsides.

I shall be sending you another  
bundle before many days.

As Ever Yours

E. L. Greene.

Berkeley, California  
August 26, 1882.

Dear Mr. Watson:

It has seemed  
very long since we had any  
new botany from your  
pen; but this large Contribution  
to X, shows that you have all  
the while been busy as ever.  
I am not a little chagrined  
at my having overlooked,  
at the time, my collecting the  
plant; the fine specific char.  
of Myosurus cupulatus.

You appear to have seen that  
Platte River Lupine growing,  
and have found it, as I told  
you ten years since, perhaps



the best marked perennial  
species of the whole Rocky  
Mountain district.

Prof. Hilgard has just brought  
down from S. Washington <sup>Co.</sup> Ly,  
among several other nice  
things, the rather odd-looking  
little Knottura of which I send  
herewith, a specimen or two.  
There is but one specimen which  
shows fruit near maturity, & that  
I reserve, from which to describe  
the species. I know no Knottura  
at all resembling this. Do you?  
He has two or three specimens of  
an equally peculiar looking  
Brodiaea one of which I will  
send you if I find it to be  
a rarity, and as novel as I,  
from a first glance am  
led to suspect.

Accept my thanks for the

copy of your valuable  
paper, & believe me  
Sincerely Yours,  
Edw. L. Greene.

Berkeley. Sept. 6. 1882.

Dear Dr. Gray:-

Among some plants which Prof. Hilgard has lately brought down from Washington Territory is this very odd looking Astragalus which I wish you to see.

He says it is very common; but I can find no account anywhere of any species at all like it. There are no flowers, but still, I doubt not it must be of that genus.

I have lately been appointed by the regents of the University to deliver a three months course

of lectures on Systematic Botany,  
to the students in the College of  
Agriculture. I rather expect  
that, by the beginning of the year,  
I shall receive permanent appoint-  
ment as Instructor in Botany.

I am already doing to overhaul  
the herbarium, a little, and  
correct some names.

I'm with Bolander's nice specimens  
of Baria chrysostoma, var macrocarpa  
I have to-day noticed a fragment  
whose rough business led me  
to examine its achenes; and I  
find the fragment, (a mere  
branch with two pairs of leaves  
& three heads, all immature)

to represent a very well marked,  
unpublished species. I dare  
not give you this fragment,  
because it is not mine, but  
university property; but I will

enclose a few achenes.

The pappus is most peculiar  
for a Baria, for the achenes are  
not at all chaffy - dilated at-  
tase, and are dark colored,  
as in no other species known  
to me. They are 3 in the  
ray flowers and two <sup>or 3</sup> in those  
of the disk. I tell you this  
because I fear they will become  
detached in transitu, and  
thus prevent enumeration.

As Always Yours

Edw. L. Greene.

ly color alone, had paired  
off as one, my white-flowered  
H. spicata + yellow-flowered H. hispida;  
+ also my white & red H.  
oppositifolia + yellow "H. gracilis"  
i.e. depauperate H. Douglasii.  
I have lately found another new  
Encelia(?) in the Cal. Acad. but  
you make Yuccas of my Encelias!  
What is the point of distinction?  
The latest novelty I have unearthed  
over in the Acad. collection is  
a single branch of an apparently  
shrubby Corethrogyne - very large  
sub. coriaceous, densely tomentose  
leaves, coarsely serrate throughout;  
scales of campanulate involucre  
in many ranks; style tips  
red-bristly, but only short-  
pubescent(!) (C. detonsa, mihi);  
unmistakably of this genus, in spite  
of its peculiarities.  
Sincerely yours. E. L. Greene.

Berkeley, Sept. 19, 1882.

Dear Dr. Gray:-

Your favor of  
the 5th inst. is before me.  
The appointment at the  
University, which I have ac-  
cepted, is only for a three  
months course of lectures.  
It is, however, possible that  
at the expiration of this  
time, the appointment will  
be renewed, to the end of the  
University year; or else it  
may be that it will come  
to a permanent thing as  
"Instructor". Prof. Hilgard  
is still Professor of Botany;  
but his health is much  
impaired.



As to Hemizonia, let me once  
more insist on what you do not  
yet reply to, that in "H. gracilis"  
(which I give up, & to a much  
depauperate H. Douglasii) the flowers  
are yellow, while in H. oppositi-  
folia, they are white or pink,  
& turn red; therefore they  
can not go together, so long  
as the color character is allowed,  
in Calycadenia, to be a good one.  
I am sorry that I did not, in  
the Sept. Torr. Bull. more  
pointedly state, and argue for  
my conception of the value  
of mode of branching, and in-  
fluence, combined with  
that of odor of herbage; (points  
not generally thought of in am-  
prolita) and the little importance  
(in Calycadenia) of akenes &  
pappus, which are so much

alike in all. I venture  
H. cephalotes, upon these  
three characters; branches  
assurgent; heads capitate  
crowded; herbage fragrant.  
H. multiglandulosa to be distin-  
guished from it, by its being  
opercally & paniculate branched  
from base to summit:  
heads scattered at ends of  
branchlets; herbage ill-scented:  
these two to illustrate how  
implicitly a field botanist  
will rely on such characters  
in this section. But in  
color of flowers I have  
just as much confidence:  
& that which, in my former  
letter, I was very emphatic  
in my attempt to point out  
was, that yourself, while  
seeking to distinguish H.  
Douglasii & H. multiglandulosa

Berkeley, Sept. 28. 1882.

My Dear Dr. Gray:-

I have now  
been examining again the  
Hologoria affair; and I too  
fail to find any trace of the  
disk-poppus in any of my  
own specimens. But, in the  
fragments which came, this  
year, through the hands of a  
farmer, from the Napa Soda  
Springs, it is easily manifest.  
I send you all that is ~~left~~<sup>left</sup>  
of those fragments, and you  
can see for yourself.

The ray-akenes in these are  
far from mature; but I have  
been looking at their poppus,  
and I find it promising  
to be something decidedly

different from that in the  
specimens of my collection; ~~and~~  
It will apparently be a  
deeper cup, with a quite  
sharply toothed margin;  
so that in all probability  
we have (or shall have by and  
by, when good specimens of both  
are obtained) a genus of two  
nice species!

I did not mean ever to say  
more to you about Hemizoria  
Lobbi: but this morning I  
have examined it again; &  
though the glands at the ends  
of the small leaves are not  
so obvious as I seem to have  
indicated, being traceable in only  
some of them, yet the main  
characters of virgate group are  
present - namely the

virgate branches, and  
the wholly distinct chaff:  
in view of which, I would  
not know how to refer it, as  
a variety, to H. fasciculata.

I sent you, weeks ago, some  
seeds of Convolvulus occidentalis  
that you might grow the  
plant; but I do not know  
that the envelope ever got to  
its destination. You will  
have seen my remarks on  
it in the Bot. Gazette.

Yours as always

E. L. Greene.

Chamaesaracha. The calyx  
+ corolla are enough.

I may have been presumptuous  
in guessing its root to be  
animal. But you will have  
observed that I gave it as a  
guess, + not as a certain  
fact. Happy New Year to you!

Sincerely Yours

E. L. Green.

P. S. Lemmon has also nice  
specimens of my Gilia  
Buckminsteri, which I  
would not print because  
you had dared to call  
it G. Thurberi, a plant  
which I know as well as I  
know any Gilia, having  
seen any quantity of it  
in the very region whence  
Thurber obtained it.

Berkeley, Dec. 27, 1882.

Dear Dr. Gray:— I have  
had long on hand two  
unanswered commun-  
ications from you,  
and am not yet ready  
to answer. A parcel was  
half made up for you  
more than two months  
since, and now that  
vacation has come, & especially  
since Prof. Hilgard has  
regained his health &  
will take his botany  
classes next term, I  
may return to my duty  
to you, perhaps next week.  
I wish now to speak of  
a new composite genus,  
which I found neither in  
flower or fruit, in Kelley,  
two years ago, & which



wished to dedicate to the man  
who paid the expenses of two  
of my most fruitful excursions  
in 1880. I ticketed my  
imperfect specimens Ceanothella  
subalpina & sent some both  
to Cambridge & to Kew, at which  
latter place you saw them, &  
thought the plant would be  
a Matthiacea of some recognized  
genus. I believe it would  
prove of near kin to Petasites  
& Gussilaga. Well, Gernmon  
has obtained beautiful  
specimens of the thing in  
flower & fruit & it is, (if  
I erred not in my conclusion  
drawn from a mere glance)  
a Chicoriacea!

You pay me nice compli-  
ments sometimes; but that  
in your letter of Oct 24,

is not such; for you  
accuse me of having made  
in my Chamaesaracha  
physaloides, a synonym  
for Physalis lobata.

Do I not know Physalis  
lobata? I would not  
wonder if I am a good  
deal more familiar with  
it than you are; for I  
have seen acres of it, &  
studied it for more than  
a half dozen successive  
seasons, in Colo. & N. Mex.  
I have, by the way, a settled  
conviction of my own,  
that it deserves generic rank;  
but I have no idea of publishing  
my opinion.

When you see my S. Arizona  
plant you too will see a

Berkeley, Feb. 15. 1883.

Dear Dr. Gray:- Your card about  
the Antennaria is just-in. The plant-  
has gone into all the principal herbaria  
of this country, & many in Europe  
as "A. franserioides, n. sp.". My description  
was written out ten and a half years  
ago, & is now before me, having been  
withheld from the press solely because  
you said, in what-I felt to have been  
~~in~~ too great haste "A. discolor", not because  
I feared you would still dissent - after having  
made a careful comparison, E. L. G.



NOTHING BUT THE ADDRESS CAN BE PLACED ON THIS SIDE.

Dr. Asa Gray  
Cambridge  
Massachusetts.

Berkeley, Feb. 19. 1883.

Dear Dr. Gray:— I have just  
mailed you a small parcel.  
In the more slender of the  
Holozonia specimens you  
will find the disk-pappus;  
in the others it hardly appears.  
Encelia stenophylla is the  
same as of which I sent  
sketches some time ago under  
the name "E. leptophylla," but  
stenophylla is manifestly  
better.

The Hemizonia I beg you  
to examine carefully. I  
at first took it for ramo-  
sissima, which I now  
perceive it is not.

The great quarry



mind is. Where did it  
come from? It was  
plainly a ballast- waif,  
and there was but one plant,  
very large, but most of  
it, in its extreme bushiness,  
lying on the ground.

The ray- akenes are well  
formed, but sterile, perhaps  
for lack of cross fertilization.

The poor specimen of the  
Polemonium from W. Y. is  
of course insufficient for  
a full description; but I think  
flowers will, when found,  
confirm it as a n. sp.

The leaves & the habit are too  
unlike any forms of P. corulaceum  
I have ever seen.

I thi' it possibly it may not

be so new to you.

Among the Umbelliferae from  
Mrs. Austin, which I am  
unable to identify, the

Pencedanum seems to  
me to be undescribed; but  
I dare not say positively &  
Mr. Watson, can tell better.

Yours as always

E. L. Greene

Berkeley, Feb, 21, 1883.

Dear Dr. Gray:- Yesterday  
in the Cal. Acad. I came  
upon another small lot-  
of Dr. Keatch's Cedros Island  
plants, and I mail you  
a small registered parcel  
herewith, with specimens  
of two or three apparently  
n. sp. for your Herbarium.  
The material is scant, but  
I divide it between us.

The Hemizonia is remarkable  
among Hastmannas, for its  
fertile disk-akene, & is  
well distinguished from  
H. ramosissima, by that  
char, & its very stamens.

long (almost filiform) pappus-  
scales.

The Brickellia will apparently  
come in near B. Wrightii,  
but has much larger heads,  
& is more strictly shrubby.

The Bigelovia from Owens Valley,  
does not appear to be described,  
& I have divided Dr. Kellogg's  
only specimen, that you  
may see what the thing is  
like.

The parcel is very small, &  
on account of the Hemizonia  
too precious to take risk,  
of being lost, so I register it.  
I interrupt you often,  
but I hope always with  
something you want to

know about.

Sincerely Yours

S. L. Green

You too, I see, have been  
accustomed to write  
"Cerros" Islands. That  
is surely incorrect.

Cedros (Cedars) is the word.  
Spanish d before r is  
almost lost to the ear, &  
so I guess early writers  
who knew not Mexicans  
wrote according to what  
they thought they heard,  
& that would inevitably  
be Cerros rather than  
Cedros.

S. L. G.

My friend Your Anthon  
being and in, Mrs.

Berkeley, May, 10, 1882.

Dear Dr. Gray:

It is so to me that  
there will have to be one more  
Beria added. I can make nothing  
but a species of a single plant,  
the  $\frac{1}{2}$  of which I am now sending you.  
The pubescence is quite characteristic,  
and the slender, but yet differently branched,  
habit is also peculiar; while with these  
points there is a most novel kind of  
happens; namely, small & short-  
but acute scales, supplementing the  
about equally numerous anvil res.

The additional Micronis looks  
enough like a good species; but I  
am afraid something may yet  
turn up, intermediate between it and  
my last year's M. attenuata.

The M. acuminata, Gray, which I sent  
you lately, but have not heard from,  
is a better species than M. attenuata, var.

I am now wrestling with Proxima, for  
a while. Have two species to add to  
the number now recognized. One,  
my own collecting in Mexico, carelessly  
referred by me to E. glaucum. The other  
as Vuttellian "Stytophappus" which you  
had reduced. As always, S. L. Greene.



Berkeley, May. 14. 1881.

Dear Dr. Gray:

The two *Grossulars* I spoke

of the other day I am now able to send  
mature fruits of; a thing I could not have  
done before; for while both are abundant  
all over the country, and usually grow  
together, one comes to maturity a month  
earlier than the other. I had found  
characters enough, even before I had  
compared akenes & pappus. But now;  
note the light akenes & dingy pappus  
of the one, & the dark akenes & light-  
white pappus of the other; also the  
difference in the character of the  
ribs of the akenes. Even the difference  
in length of style seems to be a  
usually constant character; so that the  
greater size of the globose of ripe fruit is  
always a mark of *G. grandiflora*, as  
well as their showing whiteness!

The heads when in flower are more  
conspicuously unlike, as you will see  
in the good specimens of both which  
I will soon have ready, and will send ~~you~~

Yours Sincerely D. G. Greene.

It is in Sonoma County  
a tributary of Russian River.

I am for two or three weeks,  
(or perhaps much longer) upon  
the practice of patience.

You must have mailed  
to me, in Boston, weeks ago  
a letter about Baries &c  
with a 2-cent stamp on  
it instead of a 3-.

They notified me; but the  
"two weeks" are hardly long  
enough, & I fear it will  
have gone to Washington.  
A like thing happened a year  
ago, with a letter from you  
the contents of which I was  
less anxious to see.

Yours as always  
O. L. Greene

Berkeley, June 7, 1873.

Dear Dr. Gray:— I am glad  
to have this letter about  
Microseris: but I fear I  
have nothing to add.

M. sylvatica, which you  
enquire about— I know  
nothing of, except that  
I have seen a single, poor  
specimen, in the Herb. Cal.  
Acad.

There is also a single specimen  
of what I suppose to be the  
true M. laciniata, in  
the same collection, and I  
will examine it again,  
the first time I go over.

I have sought more diligently  
for M. macrochata than  
for any other species; yet,  
to this day I have never  
met with it. I can find  
nothing answering to the  
description, in any of the  
herbaria.

I am well content that  
M. Douglasii shall include  
M. cyclocarpa, & my new  
proposed M. melanocarpa;  
~~but~~ <sup>and</sup> then are some forms  
found this year by Mrs. Curran  
that I have not seen before,  
which will go into it, and  
make it a species of very  
wide variability indeed.  
Next week I will be sending

you another parcel  
which you will find  
very interesting, I think.  
Aphanochata has been  
found abundantly this year,  
by Dr. Parry & Mrs. Curran  
in several parts of the state,  
& in good condition.

It is simply a very clear  
species of Pentachaeta,  
& is distributed by the  
collectors as P. aphanochata, <sup>from</sup>  
but it ~~ought~~ <sup>ought</sup> to be P. exilis,  
or the other, P. Bigelovii. However  
I did not dare introduce the  
alteration.

You ask where is Mark  
West's Creek.

Mark West's Creek

Berkeley. June 15, 1883.

My Dear Dr. Gray:-

The letter which was held for postage two weeks in Boston, arrived yesterday. I now send, in a registered parcel, specimens of Lotimor which will, I trust, be found instructive.

G. grandiflorum, Gray & G. laciniatum, Greene you will see differ, first, very widely in the character of the pubescence, as well as in form of foliage. The abaxes in the former are all alike. In the latter those of the outer row are different - from the rest, being more conspicuously ribbed, & of a different color. The stipe is always a third shorter, also in this species, & the pappus dingy.



A very striking distinction  
is given, chiefly in the living  
plants, i.e. the length and  
expansion of the ligules.

In Y. grandiflorum they  
are very short, & hardly exerted  
beyond the involucre, so  
that the full flower head is  
hardly an inch across; but  
in Y. luciniale the same  
is 2-2½ inches in diameter.  
Lastly, the latter (altho the  
two grow always together)  
begin to flower three or  
four weeks later.

Lobelia Chilense, Gray  
Wiel; this is a hard case!

I wonder not a little at the  
disposal made by Benth & Hook  
and yourself of these plants.

Still, though half the time it  
seems to me that - in some  
(Chiliana ones included)  
here, at least a half dozen  
good species (the akenes are  
so very different - & they do not  
run together) yet I dare  
not say so in print.

But Nuttall's Cryptopleura or  
Kyrriapleura must, at the  
very least have several as  
varieties; and there, you see  
I find another quite as  
remarkable one, having its  
outer akenes very pubescent,  
but neither inflated, nor  
much winged. Even that -  
Californian form in which  
the akenes are all white,  
is distinguished from all  
Chiliana forms, by having its  
akenes only half as large, &  
of different shape.

I think you will not dissent  
from my view that we must  
rename all these, at least as  
varieties; & that Nuttall's one  
would be named against it  
we did not preserve his  
names *Rynapleura* & *Crypt-*  
*-pleura*.

That clover of the salt marshes  
is no new thing to me. I  
saw it about Valli's grass  
ago; saw it there this year,  
& now, at last, I collect & examine  
it to find it undescribed;  
& very peculiar to.

My *annualis*, *Madia citriodora*  
of Yonka. 1876. comes in  
this year from the Sacramento  
country, & with it another  
equally *annualis* new  
species. The collector did  
not distinguish the two.

Berkeley, June 21, 1883

Dear Dr. Gray:-

In that letter you  
month ago, which got retained  
two weeks in Boston, you made some  
inquiries about "Lupinus Lesingii,"  
The name is new to me, but I con-  
-sider it as synonymous with  
L. spargioides, Less. & Bot. Cal.

I have sought the thing vainly in  
the herbaria here; but I remember  
having seen what I thought - might  
be it, on the sand hills toward the  
Cliff House, nine years ago.

Today I went in quest of it;  
and appear to have been suc-  
-cessful. I will send a

good suite of specimens as  
soon as they are dry.

It is assuredly L., though I  
found a few plants flowering  
as if annuals, from seed of  
last year, apparently; but that



happens in the case of J.  
grandiflorum, & J. laciniatum,  
as I have this year observed in  
Berkeley.

The plant now in question is  
not very too distinct from J.  
laciniatum; the last points  
being the likeness of akenes  
outer and inner; and the  
brevity of the style; for the  
rest it is a much more  
slender plant, with smaller  
four flower heads.

Yours very truly  
E. L. Greene.

Berkeley, July 14, 1883.

Dear Dr. Gray:-

No, I am not yet professor; nor am I likely to become such. I doubt if I ever obtain the lectureship this year; Bolander has applied, & his friend are working for him! I am doing nothing in the way of effort to obtain the appointment; do not care much about it.

Your epistle on Lupinus I am glad to have received. That you had mixed with Lupinus, that which I mistake for Mittell's laciniatum is a surprise to me. It is the most common of all the species hereabouts, and must needs have got into all the collections. I am glad you decide in favor of specific rank for the Calif. annual species. I could have had it in print so myself, by this time but for my dread of yourself; yet I should perhaps have erred in choosing, as I should have done Californicum for its

specific name. I thought that was as  
old as heterophyllum; but I infer that  
you do not find it so.

Cryptopium is not rare, & never shows to  
me any sign of passing into the other forms.  
I have a new, leafless Truximum from

Rushy, <sup>Arizona</sup> but only a single specimen.  
My Peris Allos n. sp. is also in a single specimen.

I guess also that the Scott Mt. plant -

you referred to is not extant beyond  
the single sample which you are happily in  
possession of.

I send you now, a good lot of L. sparguroides  
+ with it some new things, namely;

Linum lipidum, n. sp. which you are not  
to thrust into spargulinum or micranthum  
and so, put me to silence! Look at its petals  
which are lipid!

Lagophylla speciosa will perhaps be your  
L. glandulosa; if so you must add  
something to the description; its somewhat  
height, its sessile leaves; and its  
rays, a full half inch long, make a really  
beautiful & showy head; but there are

of very delicate texture, & shrink  
away almost to invisibility, as soon  
as plucked, or when the sunning  
are run upon them.

Gilia staminea goes by the side of my  
G. heterodoxa, which you kicked against,  
and which is therefore still unpublished,  
yet sure to find recognition some day,  
as well as this.

Rushy's plants will speak for them-  
selves. Do not tell me that  
Rushya is not a good genus, I will  
obtain for you, if possible, a complete  
specimen.

Have you made yet a Succisa trigonata?  
I have also from Rushy a fine n. sp.  
(one specimen) which I would have  
called S. Petasites; but I find there  
is already a species having that  
name. Names are hard to find  
for novelties in this genus.

My S. Clevelandi. I presume you have  
given a place in your Mt. Flora, but  
you have not told me.

I ought to say, while talking about  
composita that - I found, last week  
your Cnicus Andreusii, no doubt.

It is abundant in the tules (an aquatic!!)  
between Benicia & Suisun. I saw it only  
from the car windows, but near enough  
to tell that it is no species known to me,  
& is, in all probability - what I say.  
I will try to get it collected; will go after  
it myself.

Yours as always

D. L. Greene.



Berkeley, July 18. '88<sup>3</sup>.

Dear Dr. Gray:-

I was in too much  
of a hurry about my "Liuma bipidum".  
I perceive that L. microanthum  
often has its petals more or less  
deeply notched. It had been  
long since I had seen the species  
& had forgotten its look.

What about this alpine  
Actinolepis? I can make

it of no other genus!

I am, however, too busy with  
other matters just this week,  
to give the plant more than  
a glance, with the help of a  
lens.

Yours sincerely

D. L. Greene.

and got but little of the same.

Claytonia macrocarpa you  
+ Mr. Watson will relegate  
to C. purfoliata, until you  
have seen it growing.

Its herbage is as succulent  
as, unless boiled first, about  
as immortal, as that of a  
Cactus or Cotyledon; & no one  
seeing it alive would be  
likely to compare it with  
the C. purfoliata. Still, when  
cooked & dried, not much  
but the size of seeds, remains  
to have a species, in.

Malacothrix Curranii you may  
find identical with 'Clevelandii;  
but it looks to me different -  
though I can not just now  
compare the two.

Yours as always  
E. L. Greene.

Berkeley. Aug 11. 1883.

My Dear Dr. Gray:-

Not only does Mrs. Laysie-Crisman still bring in, from every little excursion, nice new species, but Dr. Harkness and I have just made a wonderful haul from the midst of the tules along the west side of Suisun Bay, midway between Benicia and Suisun, and not 40 miles from San Francisco!

The beautiful Cercolobulus I at the first believed would be a n. sp. but I now guess it will only amount to the addition of C. sepium to the flora of our Pacific coast. Yrs. I have never seen that -

The great red flower of the tules.

species before with such  
shaped leaves, nor with  
such large and beautiful  
rose-purple corollas.

The Eleocharis arcuata is  
a remarkable species.

Each root produces, besides  
6-18 inch, fruiting culms,  
just one which is from  
5-8 feet (!!!) which forms  
an arch about-knee high,  
the apex rooting & becoming  
proliferous. The matted  
mass of these tiny arches  
renders it nearly impossible  
& penetrate the masses on  
foot, except by raising the  
foot high, and treading  
down the mass!

The thistle which I told  
you of before, & which I hoped  
would be the var C. Andreuxii



proves to be altogether new,  
and I call it C. maritimus.  
It grows only where the tide-  
water reaches it, so that  
some inches of the lower  
part of the stem are submerged  
every day.

The Hydrocotyle I have no  
means of comparing with  
Kellogg's H. prolifera, for I  
can find no specimens of that  
in the Herb. Cal. Acad.

It might also possibly be H.  
interrupta Muhl. But I  
suppose it is really neither.  
I can not find that. There is  
any known species with this  
dichotomous inflorescence,  
hence I call it H. dichotoma.  
Helenium Harknessii, brought  
in by Dr. Harkness who accom-  
panied me, seems strongly

enough characterized.

Those tiles must be further  
and carefully explored.

We will go again. Two or three  
miles hence and remain longer.

A favorite student has brought  
me a bundle of nice specimens  
from the Spokane prairies.

The Hieracium though young  
is evidently new, is it not?

The Senecio I fear may be  
the S. Serra, Hook. which I  
do not know.

To-morrow I go to the Sierras  
(Summit Station) but do  
not expect my four or  
five days there to yield  
so much as what the Sierran  
warriors surrendered to us in  
three or four hours!

Yours sincerely

E. L. Greene.

Berkeley, Aug. 20, 1883.

Dear Dr. Gray:-

I have just returned after a week in the Sierras, and am glad to find two letters from you, and also copies of your review of the Candollean book.

I think you must have failed to notice what I had written on the back of the little envelope, (which contained the head of S. Layneae and with it a leaf of S. Actinella). Of the latter I sent you before, one whole plant. I return the little envelope just as I sent it before. The three leaves <sup>and 1 head</sup> of S. Arizonicus I will also enclose in in a small envelope.

I hope you will, when you

find yourself obliged to quote  
my Lagophylla congesta (if  
not before) examine the  
plant. This I know you  
have not done yet, however  
much of it may have passed  
under your glance.

You will not tell me that those  
abundant and large, dark  
glands, as well as twice larger  
flowers and fruits, do not give  
it a clear and unquestionable  
specific character!

A few nice plants from the  
Sierra will be mailed to you  
before long. I trust.

Yes, I saw the Anderssonella in  
the Acad. Herb. a couple of weeks  
since.

Sincerely Yours  
E. L. Greene,



Berkeley, Aug. 31, 1883,

Dear Dr. Gray:-

It was a batch - that - last - in which many of the things had not been carefully looked at by me, hence so many of my guesses at n.s.p. have proven poor guesses. I had not reached the conclusion that - the Cal. Loxium is different from the Chilean from books only. There are good Chilean specimens in the Herb. Cal. Acad., and I had carefully compared them. My Senecio Arizonicus, is far from S. Hartwegi, according to the leaf for which I am obliged to you.

Yours as ever, S. L. Greene.

Berkeley, Sept. 1. 1883.  
Dear Dr. Gray:-

I doubt if I have  
any representation at all of the  
Rusbyan *Galium* you enquire  
about. I can not find any.  
But, guessing as I do, that you  
are engaged upon that genus  
I hasten to enclose a little of  
what appears to be a Californian  
n. sp.

It grows with *G. Bolanderi*, and  
the fruits of it are, when fresh,  
exactly like those of that species,  
pearly white, but blackening as  
they dry.

I shall send you quite a nice  
parcel of rare things from Lake  
County, before many days, I trust.

Yours sincerely  
P. L. Greene.

Berkeley, Sept. 19, 1883

Dear Dr. Gray:- I have now  
mailed you one more parcel,  
containing some things which  
must prove interesting.  
The Sparganium I discovered  
two years ago, but could not  
obtain mature fruit, until  
now. I thought, meanwhile,  
that it might show itself a  
merely overgrown S. angustatum,  
but its fruits have a different  
shape. It must be the  
largest Sparganium known,  
for the longest leaves are  
9 or 10. feet, and as I stood  
among the plants, some of the  
heads of fruit were borne  
upon a level with my eyes  
i.e., little less than 6 feet.

It seems to be very local.

I have detected no Sparganium anywhere else, in any marsh meadow, except the little one that grows in water, in Donner Lake. I have a specimen for Dr. Engelmann, but some one has said he is in Europe, and I have not sent it.

I can not find that any one of the many synonyms of Minimus luteus was made for the plant I am now sending under a new name. I therefore trust M. moniliferus will hold. I sent you the same thing, years ago, and you must have it in abundance, for it is the commonest Minimus in the Sierra. You called it luteus, though you without having seen the tubers, I



perceived it was not that.  
 Its corolla alone will clearly  
 distinguish it. The limb  
 thereof has hardly any perceptible  
 irregularity, and is nearly rotate-  
 The long tube is characterized  
 by a pair of neat folds, <sup>outside & under side,</sup> which  
 are conspicuous, in even the  
 dried specimen. The plant  
 is nearer M. mesochorus than  
 to M. luteus, yet is distinct  
 enough from that.

Astragalus Clelandii I published  
 a year ago; but I had sent it  
 to you, under the name "melilotoides,"  
~~you~~, not having thought to look  
 and see that there was one Old World  
 species, sailing under that name.  
 Mr. C. got but one specimen, &  
 that, in flower only, you already  
 possess; but now you have  
 it nicely fruiting.

I confidently trust you will, after seeing the specimens now sent, have no objection to my Lagophylla congesta. I could add that the plant yields a very strong, bad odor of cucumber vines! L. ramosissima is scentless.

Horizonia ligulifolia + H. Clevelandi grow intermixed up there, just as you see them. I find that the latter species has, what I thought I detected in Cleveland's freshly dried specimens, a sweet balsamic odor, very unlike the musty smell of the former.

Sidalcea. I have long felt sure that the smooth, pale, sea-greenish one of the Sierras is distinct from S. humilis, and yet, of the latter I still possess no fruit to compare. Mrs. Austin's plant is clearly new; the corbel well marked.

You must tell me if I am  
wrong in calling that  
Pentstemon, P. Lemmonii.

Aptophyllum, undulatus, near A.  
imuloides + A. creceus.

Astragalus claviformis. I do not  
feel sure that this is not the A.  
saxiflorus of Mr. Watson; but he  
can tell.

I sent you, in the last parcel, a  
"Helenium Harknessii", against  
which it was not strange you  
should protest; for on going to  
the original account of H. Bigelovii,  
I discover that my plant must  
be the very same. But what  
misled me is the fact that  
everything in the Cal. herbaria  
that is called H. Bigelovii is a  
plant of such very different aspect.

This common plant (of the mountains  
and of the coast marshes) has glabrous  
thin, non-decurrent leaves, and  
is odorless. Its akenes too, have  
a nice character, for they are  
ribbed, as <sup>in</sup> the true Bigelovii they  
are not, and they are nearly destitute  
of villosity, as those of the other are not.  
So then the n. sp. should be the  
commoner, mountain plant.

But alas! I find a Bolanderian  
specimen from Yosemite, and  
one of my own collecting at  
summit which looks intermediate,  
so I give up.

In the matter of my "Galium frangens"  
I had wholly overlooked the note  
saying of G. Andrewsii that it  
has berries.

Now, I have done, for to-day.

As ever yours  
E. L. Greene.



Berkeley, Dec. 27. 1883.

My Dear Dr. Gray:-  
For more than  
a month past I have been unable  
to do a thing in botany. Hence  
my silence towards yourself.

But yesterday, the first day after  
the Nativity, I got to work again  
at some very beloved weeds, and  
I hope I shall shortly have a  
parcel ready for you.

My volumes of the Bot. Gazette are,  
just this week, all in the hands  
of a book-binder; therefore I can  
not point you to the page whereon  
is printed Bigelovia juncea; but  
look in some early number for  
the year 1881. It can hardly  
have got into an earlier number, for  
I discovered it in November, 1880.

Your plant of S. Cal. so named

has long been in other barlaria (since  
1881) as B. Mohavensis, Greene; very  
unlike juicea in habit; so much  
so that I can not unite them.  
The flowers are also different; but  
the akenes are not, & the involucre  
hardly. I should have printed  
Mohavensis but for the fear you would  
not agree with me. But then,  
you have not exactly approved either  
my B. glutinosa or B. tridentata. Both  
of which I would no longer withhold  
from the printer; and I repeat  
them up in the Dec. For. Bulletin,  
whenever that appears.

Very Truly Yours

Edw. L. Greene.

# California Academy of Sciences.

Post Office Box 2247.

San Francisco, Jan 6<sup>th</sup> 1884.

My Dear Doctor,

I am glad to have another letter with more Minuli. The "M. Rattani Gray in herb." has been in manuscript some weeks. In Rattan's herbarium I came upon your name for it; but we had it there already, collected by Mrs. Curran. In both Rattan's & Mrs. Curran's collections is also another one we found with Rattani, and, by the way, both, unexcusably mixed with it - having a slender habit, linear leaves, simple corolla-tube and exserted, incurved capsule. Probably none of it reached you.

Yes. "M. luteolus" I give up, because it has only a dwarf, compact habit and much larger and than true subellus. But, on one of your subellus shoots is a Washington Is. specimen which I did not even examine at the time, but which I distinctly remember the peculiar look of, which I now find in our collection, and think must be a species. According to your description of Minulus characters it will be caught. I can refer you to nothing but the more precisely triangular calyx-teeth and the fact that they are arranged so as to close the orifice.

roundish smooth seeds only  $\frac{1}{3}$  the size of the linear oblong  
5-angled ones of the rubellus. I have but one specimen

but a good one, collected by Hilgard. Guess was by Cusick  
or Lutzendorf if I remember right.

The Broweri too has good seed-characters, namely, a lighter  
color, an oblate-oblong shape, and distinct honeycomb reticulation.  
not to speak of its nearly regular corolla limb and the  
purple color of the whole flower.

Very sincerely yours

Carl D. G. Brown

203,

Saksdorf,

Sw. 1883.



Berkeley. Jan. 23, 1884.

Dear Dr. Gray:-

I have to  
thank you for your response  
about the Mimulus from  
W. J. albeit there was no need  
of my troubling you. For I found  
that I had made a note of  
Suktsdorfs plant before I returned  
your specimens. I see no  
reason why that is not  
good M. inconspicuus, of which  
it has exactly the calyx and  
corolla, different enough from  
those of M. subellus. In breadth  
of leaf I find the aforementioned  
species quite variable.  
Your plant from Congdon  
I do not know what to  
make of. I would not like  
to attribute such a calyx to

M. inconspicuus. I shall  
do nothing with it until I  
know more about the plant.

In two or three instalments  
I have received doubtless most  
of the sheets of Borriginave,  
but some pages are wanting.  
I know not how many - out  
of Kryzitzkia, a genus  
to which, by the way, I  
would have set quite dif-  
ferent limits, and cer-  
tainly shall, when I come  
to it. Of course now, for  
public appearance's sake, I  
must defer my own work,  
so long preparing for, on  
the Californian Borriginave.  
Plagiolobus also I per-  
ceive to be a very natural  
genus, but not quite as

you have taken it.

You could have had, from us, good Chilean specimens of P. nigriscens, collected by Philippi and if you had only seen the results you would have been saved the mistake of referring to that species either of our Cal. and Oregon plants.

We have, by the way, a fine Chilean specimen of Minuartia lutea, L. doubtless, in default of some important books, I may err in my application of some of the old specific names; but that risk I will take rather than let go from my pen, anything like the now habitual treatment-

of the Californian "M. luteus".  
Our collecting for two seasons  
past has been made in all  
parts of the state with my  
work on this genus in view,  
and it might be expected  
we would have new, as we  
surely do possess, some  
new "forms" here.

The printing of my part  
of the next Bulletin will  
begin three days hence.

You must prepare to be  
surprised with my work,  
(for I have undertaken a  
good deal) perhaps pro-  
-voked; but I hope you  
will, even in the latter  
case, refrain from  
criticizing me publicly



in any spirit of acerbity.

Sincerely Yours

Edw. L. Gurne

Berkeley. Feb. 1, 1884.

My Dear Dr. Gray:-

I am not  
intending to print Blepharizonia  
at present - perhaps never, unless  
I can reestablish Calycademia and  
Hartmannia, and refer original  
Hemizonia to Madia. Your  
projects, you will think, and  
may be correctly. At all events,  
I will make no more synonyms  
than this year.

I mailed you yesterday a copy  
of my lecture to the Supreme Court.  
I wrote it - under obedience to,  
though entirely independent of any  
suggestions (as to matter) from,  
certain legal authorities.  
All I need add is, that I am  
not arrested for contempt.

Their Honors vent all their  
rage on the attorneys who  
duped them. The injunction  
was given, carelessly, from the  
chamber, and they appear not  
to have known what they had done,  
until very sarcasm confronted  
them.

Yours as ever

L. L. Greene.

Discovered this week, (amid all the  
flurry of other cans) a fine new  
"Brickellia multiflora, Kellogg" in  
the acad. herb. It has been there 18 years,  
and came from King's Canon. It is  
too late for a place in your flora, if  
ever.

Berkeley. Feb. 22. 1884.

Dear Dr. Gray:-

I am posting  
to you now yet one more  
small parcel. Some of the  
things I do not attempt to  
name; you and Mr. Watson  
can do that.

I have found a good duplicate  
for you, of my *Senecio Oregonicus*,  
so that you can see just what  
it is, and I hope it is new to you.

Dr. Kellogg's *Stylocline acaulis*  
you will perceive is far from  
what I called *Erax acaulis*.

That *Hederma* of Rusby's I  
have sent you before, and  
you call it *H. thymoides* which



I can not understand it to  
be; for its flowers seem too large,  
and its stems are procumbent.  
The Groximora from Mt. Shasta  
you may know, tho' I can  
not find such a one described  
in your recent monograph.  
I name it in reference to the  
almost plumose pappus.

Dr. Engelmann has been  
gathered to his fathers!  
Who, as are wondering, will  
be able to gather up the  
ends, and go on with  
Cactaceae, oaks, and as many  
more of his specialties?

I read a brief necrology  
before the Cal. Acad. a few  
nights since, which I guess

will be printed; so that  
I can send you a copy.

I am rejoiced to hear of the  
good progress which is being  
made in the printing of that  
great volume of yours.

Very Sincerely

Edw. L. Greene

The Acad. Cal. is to publish  
a pamphlet in a week or  
two: chiefly new fungi, by  
Harkness. But they will  
have everybody contribute.  
Mrs. Curran puts in a few  
new phanogams, and I some.  
Mrs. Curran will, I think  
print ~~one~~ or two that I  
do not approve; but her  
Acanthomintha lanceolata  
ought to please you.  
It is from the plains just  
east of us here; much larger  
than the original species,  
villous-pubescent, and has  
a differently shaped corolla.  
There is but one specimen.  
I am adding 3 new Mimuli.

M. moniliformis I have sent  
you. M. neppitica, I guess,  
I take out of your "M. nana"  
It has yellow flowers, corolla of  
different shape, calyx teeth  
more slender, and has a  
powerful smell of skunk.

There still remain two quite  
clear species in "M. nana";  
but I wait for further  
knowledge about which is the  
original, and also for better  
opportunities of studying the  
fresh, growing plants.

My third, i.e., M. barbatus,  
is apparently wholly new.  
I can hardly tell where to  
place it. It might stand  
near M. nana but for  
its helicellate flowers - (the



pedicel, exceed the leaves) -  
It is very dwarf, much  
branched, and the whole  
lower lip of the corolla (yellow)  
is densely bearded - the  
upper less so.

There is but one specimen  
but that an excellent one,  
but locality and collector  
are both unknown.

You are, I presume, still  
engaged upon Compositae.  
When shall we have some  
tangible fruit of all your  
late years of toil?

Yours sincerely  
E. L. Greene.

Please address me at the  
Cal. Acad. Science, S. Francisco  
for a while. They will be compelled  
to forward for me. I am  
to be making some excursions,  
and I always return from them,  
to the herbarium there, before  
coming to Berkeley. I am  
Curator. Mrs. C. assistant!  
Yours very truly  
E. L. Greene.

P. S. I fear we have not that  
vol. of Pac. R. R. Rep. in which  
Pentstemon gracilentus was  
first published. I suspect  
its date is more recent than  
that of the Proc. Cal. Acad.  
in which Kellogg's name was  
given. I wish it might turn  
out otherwise!

Berkeley. Apr. 5. 1884.

Dear Dr. Gray:-

Yesterday I  
received your query about  
Brickellia multiflora, and just  
the day before I had made the  
discovery that - Dr. Kellogg had  
published it. Mrs. Curran,  
who is quite correct and  
trustworthy in such matters  
generally, some time ago  
made out a list of all species  
which had been printed in  
the Acad. Proc. When I failed  
to find that name on  
her list, and she failed  
to find it there, I felt  
sure that it had not been  
printed.

Among the heaps of rubbish  
which we have been

overhauling in the herbarium,  
we have made a few entertaining  
discoveries of late.

At least one of them I will  
tell you of. That is, Kellogg's  
"Pentstemon rostriflorus."

I felt bound to preserve <sup>this</sup> ~~and~~  
specimen and its label, altho:  
I do not see but that its  
discovery and preservation  
will require the perpetration  
of that barbarism instead  
of your own good P. gracilentus,  
which the specimen exactly is!

As for Erax: I am unable  
to find Bolander's specimens  
to which you refer; nor any  
thing more which could be  
of service to you.

I sent you nearly all that

was left of Kellogg's "Stylocline  
acaulis." whatever may have  
become of the rest of his  
50 specimens. I have now  
seen (in Venting Co.) probably  
50000 specimens, - acres  
upon acres - of what will  
probably prove to be the same (not  
yet in flower even) and quite  
as much of my own Erax  
acaulis, in the same early  
stage. I feel confident  
that your proposal including  
of them all under one species  
will be unfortunate.

It is an arrangement - that -  
will not be accepted by us  
who see acres of the things  
growing - one species apart -  
from the other - and with  
no apparent running together.  
Three days hence I am  
going up the San Joaquin

# California Academy of Sciences.

Post Office Box No. 2247.

San Francisco, April 28, 1884.

My Dear Dr. Gray:-

Again I am about to interrupt, if you will let me, your cogitations on Compositæ. Mrs. Curran and I have, for two seasons, assiduously collected, among other specialties, the Erithrichia of the first two sections. I have been laboring with our specimens for a half week past, and altho' I will not print any results very soon, I will tell you some things that I think will have to be done. One of my ideas is, that Lophospermum Greenei must go into Erithrichium and, next to E. Californicum. It varies greatly as to the number, and arrangement of the prickles; but I find they never take to the margin of the nutlet. The plant's habit is precisely that of E. Californicum, and, in view of the var, subglochidiatum, perhaps it could almost be appended to that species as a second var. Notice, in Mrs. Austin's plant, that the prickles are in a line up and down the back of the nutlet -! The size of corollas is of no importance in the



Scutleri group. Most of what, in our literature is called Californicum, is only a slender, small flowered form of Scutleri, whose characters are a pale herbage and anthesis (very straight-) with their apices divergent as they sit in the calyx.

In Plagiobolus I have in view three species more than you recognize: 1<sup>st</sup> P. Drigoricum, whose calyxes are as promptly circumsissile as those of P. polypodium, but nearer the base, and whose anthesis can be readily distinguished from those of E. canescens, by their far less regular shape. I am pretty well convinced that certain minutiae of the markings of the anthesis in this group - a character which no author has yet thoroughly taken hold of, as Dr. Engelmann took hold of those of the Euphorbiaceae - are very constant. 2<sup>d</sup> A prostrate, not caulescent - thing, with ~~very~~ flatly prostrate branches two feet and more long, with wide open calyxes, and anthesis with their own markings, will I think be E. apertum. It is so put, in herbarium and M.S. and I am waiting to see if Panich's plant, mentioned of you, will be the same. Mine is from Kern Co, where it is associated with Stanfordia & equally restricted in its range.

## California Academy of Sciences.

Post Office Box No. 2247.

San Francisco, 188

3<sup>d</sup> is *L. Shadlunae*, which you defined long ago to *L. leuckhamii*, from which I perceive it is clearly distinct ~~from *L. holii* (that you named *L. holii*)~~ ~~and~~ by its theca larger, and very smooth.

And now come some more new composites: first of all, one which I can in no wise dispose of without reinstating the genus *Hologymne*. What else can be done? This new thing, and *Lathraea glaberrima* are surely not to go into one genus. The akenes of the latter are, moreover, much inclined to the quadrangular, when mature, I find. In *Hologymne glabrata* they are not at all so, tho' not so flat as in the *H. marginata*.

I detect a most common character for the two *Hologymnes*, in a joint - if one may so call it, near the base of the corolla-tube, at which there is an easy break, so that the lower portion of the tube is sometimes left entire

adherent to the skene like a sort of bark!  
There is a trace of this margin in the  
skenes of Monolopia major: but I could  
not think of putting these things into Thur-  
gers.

The tall, slender, weak stemmed Baria abundant  
on the Kun Co mountains can not go in as a  
form of B. religiosa, on account of its  
pappus, and so must be a species.

The other Baria, which I do not name, is  
perhaps my own B. comosa: this I confess I  
can not say it is, or is not. Nor do I think  
it agrees with the description of B. platycarpa,  
which I long to see. So what you will with this,  
and tell me what you do.

The Microseris elegans. I distinguish from  
M. Bigelovii by the shorter skenes, and triangular,  
repand-margined scales, and especially the  
tuft of white hairs at the base of the scale inside.  
The expanded heads of ripe fruit look strikingly  
unlike those of any other species, and are  
truly elegant to see.

## California Academy of Sciences.

Post Office Box 2247.

San Francisco, ..... 188

This is all I will send at present; but there is more in store, and will be much more by and by, I hope.

Mrs. Curran is off, in the Sacramento valley this week, and when she ~~has~~ returned I will go back to the San Joaquin, for ripe fruit of *Crockeria diffusa*, so that we can see if the seed is just like that of *C. pusilla*.

Very Truly Yours

Edw. L. Greene



# California Academy of Sciences.

Post Office Box No. 2247.

San Francisco, May 16 1884.

Dear Dr. Gray:-

In my promptness about-sending you things, I do not-always give myself time and opportunity to go to the bottom of subjects; so I make myself ridiculous.

Mrs. Curran went-out-to Antioch last-week, and in meandering through the grain fields found her feet often entangled, and so, had her attention called to the long, slender stems of my "Crockeria"; luckily it had ripe fruit and she came in well supplied with just-what-I wanted. To my dismay I now detected the (very filmy) dissepiment! This has bothered me. But your "dehiscence" is not here in ~~our~~ specimens; unless that-and may mean that-~~dehiscence~~ a splitting open ought to be. I can neither coax nor compel the ripest pods to separate at the line where valves are, at-least faintly.

indicated. But I could wish it were  
otherwise. Are mine and Jones' exactly  
the same plant? In habit this is no  
Draba. In indehiscent pods it is still  
more remote therefrom. In habit and  
pubescence it goes with Thysanocarpus pusillus  
perfectly; and I fear that, for consistency  
sake, two new genera must be made.  
We have hard work to get Marcus Jones to sell  
us plants; at least, it is difficult to obtain  
from him the things we are most anxious  
to see; but I shall try for his Draba unilateralis.  
and see for myself if its pods are actually  
as dehiscent as those of my plant. Look as  
if they ought to be.

On comparing my Boeria debilis with Burnellia  
microglobosa I saw that the two genera  
were no longer terribile; but I had the impression  
that it was Boeria that must be outside.

Now I see, by De Candolle, that it is the  
right name; and I am glad.

You have committed an oversight in referring  
the Beeson Springs one to B. gracilis; you

did not see the divided leaves!

My opinion is that - it is my own Camora.  
I have an idea that - among my Vallis specimens  
I saw a trace of division in the leaves, in one  
or two instances.

Since it will meet with adoption at your  
hands, the "Hologynne" shall be

Crockeria chrysantha. and I will read  
it before the Acad. next Monday night.

I feel (or left to myself I should feel) reluctant  
to separate <sup>it</sup> generically from anything which  
it looks so precisely like as Lasthenia globosa.  
Yet I know that the <sup>importance of</sup> characters of a genus must  
not be allowed to lose <sup>its</sup> ~~their~~ weight, in favor  
of exterior resemblances.

From the foot hills back of Sacramento Mrs C.  
has lately brought - a magnificent new  
Eritrichium which will come in between E. fulvum  
and E. rothopulvum; a big thing, large  
calyx parted to base, not circumscissile, and  
stems beaked and otherwise most unlike  
those of E. rothopulvum which it most  
resembles.

For the character of Echinosperrum why is

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not the flattened character of the spicicles  
and their preference for the margin of  
the (flat-backed) nutlet enough?

Could you have consented to the transference  
of E. Griseb. to Erithichium I was going  
to ask you to do it, retaining the old  
specific name. I will now, if I can  
avoid it, make a "Griseb. Griseb."

I shall have more things to send you  
soon.

Yours as always

P. L. Griseb.

P.S. My proposed Erithichium apertum will  
not do. Parish's plant is not like mine,  
but is intermediate between that at - ten  
E. canescens. E. Shastum is now  
confirmed by fresh specimens from a new locality.



# California Academy of Sciences.

Post Office Box 2247.

San Francisco, June 19 1884.

My Dear Dr. Gray:-

It is late to be meddling with  
asteroid compositae; and possibly you may  
have noticed what I am now going to ask your  
attention to, namely, the existence of two species  
under your *Erigeron inornatus* as last given to  
the press, in Bot. Cal. and Proc. Am. Acad.

The Coast-Range plant is so very unlike that  
of the Sierras and far northward that I would  
hardly be surprised to see it transferred to *Aster*.  
Its involucre (glandular) is so much imbricated,  
and its scales <sup>so</sup> green-tipped that I have  
named it *Erigeron imbricatus*. It has, moreover,  
a less fragile pappus, a good deal, than has the  
Sierra plant; besides there are numerous bracteoles below the head.  
I suspect that <sup>this is</sup> the oldest known form of your *E.*  
*inornatus*, but I suppose that need not forbid  
my naming it, rather than the other, as a  
new species.

If I am wrong in this opinion  
please correct me, if, indeed you have not anticipated  
this whole matter, and set it right in the Syn. Fl.  
Yours very truly, E. L. Greene.

# California Academy of Sciences.

Post Office Box 2247.

San Francisco, July 22 1884.

My Dear Dr. Gray:-

I am sending you a small parcel now, chiefly on Mrs. Curran's account. The Boraginaceous plant she says she has sent you once before, and you wanted to call it Currania; but she desires that her genus shall be in Tungi. What then do we hear instead?

Madia Rammii you will find, in floral character, exceedingly like M. Goserictana; nevertheless, it is distinct enough. Tell Mr. Watson that I regret Dr. Kellogg's execrable name of sericatus for that Lupine, because the species is a very good one.

How much longer must we be patient, concerning the volume? Send my copy to Berkeley, by express C. O. D.!

Very Truly Yours

O. L. Greene.

# California Academy of Sciences.

Post Office Box 2247.

San Francisco, Aug. 4 1884.

My Dear Dr. Gray:-

My little Californian mine of *Eritrichium* is being worked only at intervals, and slowly; but I must tell you now some of the pretty well sifted results, in the first two sections. I send only nettles now; good specimens to have place in the next parcel.

Following are some proposed names. I hope to get a monograph printed along with revisions of *Eckscholtzii* (4 excellent species) *Minimus* and some other matters, in January.

Meanwhile, I do wish that *Eritrichium Austineae*, very carelessly by me mixed with your *Echinospiculum Greenei*, may convince you that the latter must go into *Eritrichium*, so that, in my arrangement of the Cal. *Eritrichia*, it may be called, "*Eritrichium Greenei*, Gray". You see the two are exactly alike in habit; and, while the *Austineae* has even stronger and more strongly barbed prickles, they are nearly confined to the dorsal ~~nerve~~ line; and the scar is that of *Eritrichium*. The scar alone would separate this from *Greenei*; but still the two should be in the same genus.

A perfect copy of these two, as to habit and appearance, is the very strange fruited


E. lithocaryum. I am sorely puzzled to know when I shall place it, in the genus.

Of course, the fact that it looks just like the gracile x Austine x Californicum group, makes me think of it inevitably, as belonging there; but, those nutlets wanting not only any manner of mucication but even a scar!

Hagiobolus develops now, in two species, a new anomaly of excavated scars

E. pectocaryum has the diffuse habit of E. canescens  
E. excavatum, the erect habit of E. fulvum + E. notthopolum.  
 It is much nearer the S. Am. plant than the N. Am. one, but is distinct enough from both.

Oh! I have skipped over one, whose place is next to E. Scouleri, namely

E. humifusum, which is stouter than E. Scouleri, & has its branches flat on the ground, its calyxes one-sided, all the divisions turned up,  (like that) its scar of nutlet-less basal, and the nutlets concurrent as in all other Eritrichia: for, as I have told you before, in E. Scouleri they are divergent! Mark also the tufts of bristles surmounting the mucications of the nutlet.



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Now if this letter, with its contents, takes you to  
your bundle of Eritrichia, do be so kind as to send  
me a printing Calyx of your var. subglochidiatum  
of E. Californicum. I suppose I have it, of  
my own collecting; but I want to be certain.

Also, I am unable to find a single printing  
calyx of E. varium in any of its forms,  
European or American. Possibly you can do  
something for me here to. I would so like  
to see just what its fruitlets do look like.

Kryinbykia I shall not have much to do  
in. We have perhaps two or three sp., only  
in all that big group.

I had just a half day with Mr. Ball, and now  
he is gone to the northward.

Yours very Truly  
Edw. L. Greene.

Berkeley, Aug. 3. 1884

Dear Dr. Gray, -

The enclosed envelope must have been left out - yesterday, by accident; for I found it this morning on my work table.

Mrs. Curran has been over to the locality of the "new genus" and more, and this time she brings in no less than three apparently undescribed Krynitzkiás, two of which exhibit such unlooked for peculiarities, that I am beginning to think the n. gen. ? may as well be admitted to Eritrichium, where it would not be much more anomalous than. For example my proposed E. lenticulare, whose umbels, having the surface and the ovate outline of those of E. leiocarpum are not a bit trigonous but actually lenticular i. e. double-convex!

And, what is strangest of all, the  
(long, narrow) scar is not in the  
middle of the ventral face, but  
near the edge, but very near  
the edge !!! This plant looks  
very like E. leivocarpum.

The second new anomaly is much  
more like the new genus - indeed  
very like it in aspect; but its  
anthesis are mucronate, and are  
inserted right end up (!!) for a  
true Eritrichium; but the (round)  
scar is very near the apex,  
\* the anthesis fall away in pairs,  
I know it is a little provoking in  
me to write about such almost  
incredible things, without sending  
samples; but I had not time  
to get them ready before I had to  
leave the herbarium, and come to  
Berkeley.

Yours as always

E. L. Greene.

# California Academy of Sciences.

Post Office Box 2247.

San Francisco, Aug. 18. 1884.

Dear Dr. Gray:-

At last I have the book!  
Of course it will furnish a prolonged feast,  
notwithstanding that Exax as you have it, will  
torment us who know some things which you have had  
no opportunity of learning; and that the very best-  
genus of Madia, i.e. Lagophylla is spoiled by the  
addition of the Hologonia, whose most important  
character i.e. the number of flowers, you have  
suppressed. I believe Lagophylla has always  
10. (5 ray + 5 disk-) in each head. Its flowers  
are "vespertine"; Hologonias are not so.

My luck in naming L. congesta amuses me, for  
I knew nothing of your Hemizonia congesta,  
which you cite as synonymous.

I am very glad to see the reinstatement of Pencephyllum  
and the erection of Atrichoseris.

Enclosed is the post office order.

Very Sincerely Yours

Edw. L. Greene.



# California Academy of Sciences.

Post Office Box 2247.

San Francisco, 8 Aug. 26 1884.

Dear Dr. Gray:-

I owe you many thanks for the great help you afford me in these certified fragments of types of Eritrichia.

As for Plagiobothrys I have long seen it to be a well marked genus, in habit, and would have come out with it myself, but for the fact that I had not seen the one species which you and Mr. Watson held as destructive of its generic rank, namely, E. Kingii. Just two weeks ago I beheld, for the first time, E. Kingii, and was glad to behold it lacking the Plagiobothrys habit.

Now what will, perhaps, worry you will be the new Eritrichium Truckense, which has nuthlets with scar higher up than in any Plagiobothrys. All the same I would make a genus of it (putting Currania with it-) rather than introduce it under Plagiobothrys; the habit is so unlike, and the habit is, to my mind, the strongest generic trait of Plagiobothrys.

I enclose my scheme of the genus. Do what you will with it. What has been neglected by

you in Bot. Cal. & Syn. Fl. & the utter  
confusion of everybody who has tried to identify  
the species is, the mode of growth. Is that - I have  
now given you a clue. Not - a very scientific  
basis for grouping, you will say; but - it is the  
most useful one I can find, and perfectly  
trustworthy.

Now, for the Kryitzkies; and out of these, I  
more than half believe the true Kryitzkies  
should form a genus by themselves; only I can  
hardly see when that business would land me, if  
we kept on.

First, I wonder greatly that the common plant  
of Nevada, & Cal. which I have called E. condensum,  
should ever have been mixed with E. circumscissum;  
tho' I may be wrong; for my plant - is evidently  
the thing Dr. Torrey had in hand; but that name  
belongs to the northern plant, which we have here, from  
N. America. Certain I am we have here two

species. If my condensum is your circumscissum,  
then perhaps I must give a new name to  
the original Lithospermum? circumscissum; which  
could be called ~~Eritrichium~~ Eritrichium Piptocalyx,  
or E. Hookeri. But if you (as is most likely  
in the case) have both species, I am right in  
giving a new name to the more condense plant

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which has the small "punctulate scabrous" mottles;  
for this can not be the "L. ? circumscissum." H. A.  
I know not how you will like my adding a third  
species to the Platygyium group. But - what can  
be done with the thing? Its perfectly smooth  
less sharply angular, much longer mottles seem  
to forbid its going in as a var. of L. oxygynum.  
Perhaps L. microcalyx + L. echinocalyx are both  
better regarded varieties of L. oxygynum; but -  
if so that becomes an extremely variable species.  
If what I have indicated as the true L. muriculatum  
be that, then your var. ambiguum must  
be a species, not a var.

E. dumetorum is a climber! Mr. C. could  
not, (or had not patience) to disentangle the  
plant from its supports, and so only brought  
top twigs lopped off.

You propounded to me the question long ago, about  
what is to characterize Echinofurum, of Echinoglochin  
go into Entrichium; and I have long ago  
thought that I see not why we may not

let it rest - on its flattened prickles and their  
preference for the margin of the nuthut.

But my knowledge of this species is imperfect:

I have plenty of Lappula, but - in some of the specimens  
you do I find prickles scattered over the back of  
the nuthut.

Now I will not worry you with a longer letter.

Very sincerely Yours,

E. L. Greene.

P.S. I did not mention that - in what I have  
taken as entitled to the name E. circumscissum,  
has its calyx a good deal less promptly circumscissile  
- we find it in the proposed E. condusatum;  
nevertheless it is circumscissile, & obviously so.



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## Plagiobothrys.

\* Stems erect, from a rosulate tuft of leaves,  
+ a foot or two high.

P. nifescens, F. & M. Calyx parted to base; scar excavate!

P. nothopulva, Gray. Calyx circumscissile; scar not excavate.  
+ + less than a foot high.

P. tenella, Gray. Slender & much branched; nutlets small  
with straight transverse lines, and conspicuously  
mureicate

P. Shastensis, Griseb. Smaller, but stouter and simple;  
nutlets very large; transverse lines less  
prominent, mureications wholly wanting.

\* \* Stems decumbent or diffuse.

P. canescens, Benth. Calyx closed in fruit; branches spreading

P. aperta, Griseb. Calyx open in fruit; branches prostrate.

P. odontocarya, Griseb. Calyx parted to base; scar excavate!

P. Torreyi, Gray. Calyx not circumscissile.

P. Arizonae, Griseb. Calyx circumscissile; nutlets of  
P. canescens nearly.

This I had named as a species, long before you printed it  
as a var. of canescens.

With this is a hand sketch of my idea. P. 122

Plagiobolus to you.

Berkeley, Oct. 30. 1884.

My Dear Dr. Gray:-

While waiting  
to hear from you regarding  
Entrichium I have been  
digging into stack of Mimuli  
which we have on hand, and  
here I am much troubled  
about M. rubellus. I entertain  
no doubt that we have two  
or three good species going  
under this name. I can  
find characters for them  
but not names; for I have  
no rubellus from N. Mex. or  
Colorado, and therefore can not  
feel so certain as I would wish  
to, about which of our Cal. (?) (I  
doubt if we have <sup>in</sup> Calif true M. rubellus)  
or Nevada specimens are to  
go under that name.

Then there is your rejected  
M. montioides which I believe  
will be the name for another.  
If I could only see authentic  
and original M. rubellus and  
M. montioides, also the  
real M. rubellus, latiflorus  
of Watson, then I would  
feel like taking hold of  
whole "M. rubellus" of your  
later writing in earnest.  
I hardly dare hope that—  
you can indulge me with  
fragments, the stock is apt  
to be so small, of types.

Your var. angustatus of M.  
tricolor is a most excellent-  
species, with capsule broader  
than long, (♂)! It is M.  
Clarkii, Kellogg.



The taller "M. Douglasii" of  
our books, which Mrs. Curran  
could fair have called M.  
Kelloggii, is M. atropurpureus,  
Kellogg, as good a species  
as any in the group.

There are four or five  
very good n. sp. in our  
collection, which have been  
taken in this year, one and  
above the two Mimulastria which  
you have worked up.

Duplicates for you will be  
sent by and by, of all of them.

I must tell you of a most  
remarkable new Rigilovia I  
have lately diagnosed. It is  
as scrofy as any Eleagnacea  
both on leaf and stem,  
but has white-tomentose  
involucral scales. I have

called it B. furfuracea.

It belongs to Splodiscus.

There is but a single branch,  
apparently old, but well  
preserved; and Dr. Kellogg  
tells me some army  
officer whose name he  
has forgotten, bought it  
from some prisoner in  
N. Mex. military post.

Yours very truly

Edw. L. Greene.

# California Academy of Sciences.

Post Office Box 2247.

San Francisco, Dec 3 1884

Dear Dr. Gray:-

About the Egletes Californicus:  
I said to Mrs. Curran, as soon as I had read Dr.  
K's description: "It is some form of Eriophyllum  
caespitosum". There is no specimen; but we  
got at Dr. Kellogg at once and made him  
promise to bring in, from his house, the drawings  
and paintings of various things, which he keeps  
boxed up away from our sight. Yesterday  
morning we had the pleasure of looking at  
them all for the first time. We will publish  
a list of Kellogg's synonyms, together with  
the names the plants now bear, in our  
forth coming Bulletin. That will be of service  
to you and others. It will also be of service  
upon; for there is no mistaking what  
species Dr. K. had. He is very conscientiously  
accurate so far as he goes.

Well: the Egletes is even the very type of  
Eriophyllum caespitosum, (according to you.)  
The "Pentstemon tinellus" is unmistakably

P. azureus.

Your announcement of the Mimulus parcel has just come; the parcel itself not yet. I will write what I have to say about that ~~you~~ immediately, and send back the parcel.

You are a doubter (and I don't blame you) about my story of a Bigelovia purpurea, but I will send you a leaf and a bud, if I can think of it when I am making up a packet for you next.

Yours sincerely  
E. L. Greene.



# California Academy of Sciences.

Post Office Box 2247.

San Francisco, Dec. 4 1884

Dear Dr. Gray:-

Can you please compare at once, and tell me by post-card, if this is your M. laciniatus. I take it for a var. of M. luteus, but suspect it is not your M. laciniatus. Your M. rebellus parcel came last night. I will re-mail it to-morrow I hope.

The glandular hairy plant from Oregon + Washington to S. Cal., with rose colored flowers, first collected by Brewer, and with which two of your sheets are mostly filled is to be M. Breweri; and this was the main point I expected to make.

M. montioides must be restored, and yet another n. sp. will be made out of your "M. montioides flore parva". of which good specimens (which you have not) shall be sent you.

As Ever.

P. L. Greene.

Berkeley, Dec 31. 85

Dear Dr. Gray:-

You have done me as great a kindness, in sending this *rubellus*, from *Minuti* out of your great herbarium that I am likely to repay you with a long, and many-pointed sermon about the specimens.

I 1<sup>st</sup>. *M. montioides* Gray, as to the plant-called *M. rubellus* var. *latiflorus* Watson. Neither you nor Mr. Watson appear to have noticed what is the best mark of the species; namely, the densely long bearded lower lip of the corolla. My *M. barbalus* is the same, but of course yields to your name. I do not count in, Brewer's "2785. High Southern Sierras" nor the Nevada plant of Lieut. Wheeler. The latter will prove to be a *Lucanum* in my opinion; the former is too different both from that and from everything else on the sheet, and is more like *M. rubellus*, yet not to be put into that either, by me at least.

II Mr. Watson's specimen on upper right hand corner = *M. montioides* of course; all the rest on this sheet = *M. hirtellus*, Greene n. sp. to be distinguished from *M. rubellus* (until we see fresh corollas of both) only by its

dwarfed and compacted habit, the calyx having a less open orifice destitute of the fringe of short hairs, <sup>the</sup> teeth sharper; and by its <sup>proportionally</sup> ~~longer~~ longer, <sup>sharp-pointed</sup> ~~stouter~~ capsule. M. rubellus can always be told by its calyx being more open, and the teeth more obtuse, but especially by the ciliolate orifice. It has not been found in California but by Miss Curran in Lake Co. and Parish in S. Berdo. though most (not all) of the latter specimens are of M. Breweri.

On this sheet I have taken some liberty in the use of my pencil; but pencil marks can be erased. Lemmon's Mohave plant I let pass for M. rubellus altho' I do not like the color of the flowers, for that species; they look purplish. I can say they are yellow in the original plant. As for Palmer's "S. let's N. Arizona" the only the specimens (small) nearest bottom of sheet are my proposed M. luteolus; the upper, larger ones are true M. rubellus!

IV. This plant of Dicksdorf will apparently force the proposed M. luteolus down to the grade of a mere var. of M. rubellus. The calyx-orifice is not open enough, but the ciliolation is manifest.

V. Bolander's plant at upper, left hand corner is evidently, I think, M. leptalms. all the rest. M. Breweri. This plant, as very different from M. rubellus, must be distinguished easily by its long, gland-tipped hairs, and great clamminess to the touch, and by its very regular corolla-limb the color of which is rose-purple, never inclining to yellow. It has a great range north and south but does not appear to either eastward or westward of the Sierra Nevada chain, does it?

VI. Here we have M. rubellus at top; at each corner below. M. luteolus, <sup>with</sup> ~~and~~ 3 specimens of M. Breweri stuck in between them.

On the three sheets which I have left unnumbered I detect only what I am willing to call good M. rubellus according to your original.

I have long been of the opinion that no character is more important in this genus, than the form of the corolla. I am always finding this view confirmed. We shall not know



all the species until we can compare them in the fresh specimen. The very best char. of M. Breweri is the nearly salver form and regular corolla. In M. rubellus, M. luteolus, & most of all in M. monticola it is more or less strongly bilabiate, without spreading limb.

I am sending you a few additional specimens of some of the species.

I thought I knew the true M. incanopiscus, and therefore made a species of the Mt. Diablo plant. But now I fear we have none of the original and true thing, and that my proposed M. Californicus may be, as you call it, a form thereof. I send you a good specimen, and, if you have no loose duplicate of the original for me. I shall take your word, if you tell me to let "M. Californicus" go for M. incanopiscus.

I am much obliged for the specimen of the new M. exiguus, which, I believe, is unpublished by you. It goes nicely alongside Mrs. Curran's M. androsaceus, which, by the way has been lying in this old herbarium for years. Collected by Lobb, and by Sison.



I return to you to day, your parcel, for which I feel under great obligations.

Have you any specimens of the Plantago I send designated as new? I think it is common on the San Joaquin plains but I can not find that anyone else has collected it. It is neither P. pusilla nor P. Bigelovii, you will find if you examine.

Yours very Truly  
E. L. Greene.

# California Academy of Sciences.

Post Office Box 2247.

San Francisco, Dec. 12 1884

Dear Mr. Watson:

The diagnosis of a new *Ariularia* from Mrs. Austin (*P. Austinia*) has led me to overhaul *P. tenuis*, out of which I have taken the western plant altogether, distinguishing it very readily from the eastern, and calling it *P. Douglasii*. The var. *microsporum*, I have always held to be distinct and have named it *P. Engelmanni*. These things go to the printer in a few days. Outside of *Polygonum* I think I have not, this year, gone upon any body's ground except Dr. Gray's, and he is pretty well posted in my perquisitions phytological. Mrs. Curran is engaged upon a piece of bibliographical dredging for which, when done the thanks of us all will be due. She is going to print in our forthcoming Bulletin, the synonymy of all the *Proc.* Cal. Acad. species of former years. A goodly number of Dr. Kellogg's names will have to be restored: *Macroscapa* for ex, (and for

to fifty (50) in place of the beautiful Stropholirium of  
Dr. Loomy.

Very Truly Yours

Edw L. Greene.

100

# California Academy of Sciences.

Post Office Box 2247.

Dear Dr. Gray:— San Francisco, Dec 31 1889.

I owe you thanks for two letters, each accompanying valuable Mimulus matters. I have just ended a week's work on our bundle of "M. luteus, L., and altho' I have taken out two or three excellent species, I have in, both your varietal names, with plenty of specimens for each. But I shall not print—the doubt I actually feel, as to whether we have in N. Am. any M. luteus, L. except your var. alpinus (of Col.; for the Sierra plant M. Gibrigi is as good a species as the genus holds, as you will see some day, by its matted and interlaced, amber-colored, subtranslucent, <sup>almost</sup> rootless rootstocks!) Our 4-foot-high plant from Alaska down, has neither rootstocks nor even a finger's length of horizontal, rooting stem; it is using poetry to call it more than a inch annual. Nevertheless, I leave it the name you and everybody else has given it. It is best so, at least, until I can see more N. Am. specimens than I now have access to. M. laciniatus is harder & kept out of luteus than some others; for M. Eschii, Reel. Bot. Cal. Acad. is erect and stouter, with leaves less lacinate, its name does not antic.



you, and I retain the species, putting in M. Leseni  
Swain's plant - just sent from you. is  
apparently what I have in manuscript -  
already, under the name M. Parishii, obtained  
by Parish two years ago.

I have written to Mr. Swain, asking for more  
of his plant.

I must send you another packet - 4 + 4. to show  
you Madia citreolosa from Modoc Co. with akemes  
nearly as much compressed laterally as in most  
states of M. sativa! So you had better have kept  
it where it was first sent, I guess!

Your Minulus exiguus, from L. Cal. I am  
describing as a new species "Gray in herb". For  
it is not in print yet, that I can discover.

If I am wrong, tell me.

Yours sincerely

Edw. L. Greene

S. F. Jan 31

83

Dear Mr Gray.

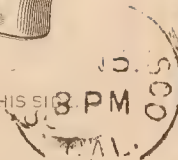
I believe that the letter  
Mimulus I was, a few days ago, pointing  
out to you, is only etc. micropicus  
reduced in size, and not a new sp.

I wish you would hunt for the plant  
in one of your rebellious states, and tell me  
who collected it in Washington Co. It is  
not being with rubens. I am sure; 2000  
ft. I am sure that it is incensurans. I also

California  
I am  
very  
true  
yours  
S. F.



NOTHING BUT THE ADDRESS CAN BE PLACED ON THIS SIDE



Dr. C. A. L. G. L.

Bridge

Mar. 20, 1881.

Berkeley, Feb. 20, 1880;

My Dear Dr. Gray:-

I was quite startled by the announcement of your setting forth upon a journey in this direction

Doubtless I am sending these lines to Tucson at a premature date; but I am very anxious to know as early as possible just when you are to be looked for in even the southern confines of California, that I may not fail of seeing you; for it is now arranged that I spend the month of April on Cedros and Guadalupe Islands!!

If necessary I will go overland to San Diego and perhaps meet you at



San Bernardino where, if I  
am correctly advised, you  
are expecting to spend some  
time, before coming up this  
way.

I finished my proof-  
reading two days ago, and  
the Bulletin will be out before  
the end of the month.

Perhaps before then I shall  
have learned from Parish  
how soon he expects you, and  
may send a copy of my paper  
there for you; and I beg you  
to read carefully, if you have  
the patience, what I have  
said about Diplacus, Eucnurus  
and Minimus. Then, with  
Mrs. Curran's help, if I am not  
here you can find our  
specimens and see if they  
are not better than yours,

and perhaps be convinced  
that my views are not  
hard to defend.

Surely you have never seen  
mature fruit of Diplacus  
or you could never have  
made it a section of Mimulus.

And so I have given you a  
hint about the somewhat  
radical changes I have  
proposed in this group  
of western plants.

I hope I shall hear from  
you before March is nearly  
days old.

Very Sincerely Yours,  
E. L. Greene.

San Diego, April 2, 1885

My Dear Dr. Gray:- I was slow  
in getting to San Diego, and I  
do not see much prospect of a  
speedy getting away. Susan is  
not yet here, nor even heard  
from, and I have been here  
five days. The Tulecua  
Cañon was too inviting, and  
I stayed two days at Fall  
Brook; I therefore missed  
Prof. Farlow altogether; but  
Mrs. Gray's letters I mailed  
before I left the train; so I  
trust he received them as  
promptly as he would have  
done had I carried them  
all the way.

Diplacus furcatus is a more  
profuse bloomer by far than  
D. glutinosus. I found a  
few last year's capsules, and  
the tubercular enlargement of the  
base of the style is just as em-  
-phatic as in the species last  
named. The foliage, as you  
will by and by see for yourself, is  
as unlike in the two as need  
be for the best of species. For  
the characteristic pubescence  
of the genus, <sup>in its abundance,</sup> you must look  
at the single specimen of  
D. stellatus, Kellogg, which species  
I have, on that account, placed  
as the typical one.

I have not yet been able to  
set my eyes upon growing or  
living Eumans brevipes, the  
pink corolla of which c<sup>d</sup>



desire to examine; not  
that - I have any fear of  
its awakening my convictions  
about the validity of Euramies.

Its calyx and capsules will  
keep it there, in my opinion;  
and yet, the corollas of all Eurami  
that I have seen fresh, have  
a "cut" of their own, which  
I feel confident I shall see  
in this one also. They promise  
me that the plant will be in  
flower by the date of my  
probable returning from Cedros.

But you had flowers!  
I hope you will be pleased  
at S. Barbara.

I hear from the Acad. that  
the letter or Bulletin which  
I had sent to Ineson for

you, are back in S. F. already.  
You must let them know  
whenever you find yourself  
about to start for S. Francisco.  
The weather is bright and fine  
here, all these days. You  
must certainly have been unfortunate  
in your time of coming. I find  
it all the while uncomfortably  
muggy and warm.

With very kind regards, to you  
and Mrs. Gray, and with sincere  
regrets that I can not be of greater  
service to you on this Californian  
trip, I give you a short-farewell,  
hoping to re-see you for the southern  
coasts in a few days.

Yours as always  
D. L. Greene.

San Diego, Cal. May 18. 1880.

My Dear Dr. Gray:—

I was safely landed in San Diego some thirty hours since, after a tedious voyage of thirteen days from Cedros up. The winds were strong against us. I had but three days on Cedros, and those at a most-unfavourable time of the year: too late for the spring vegetation and too early for that of the later year: nevertheless, I bring fair specimens of some forty species from there. From Guadalupe I have more than seventy species. The most fruitful single days collecting was at Cape S. Quentin, a hundred miles this side of Cedros. There I obtained about twenty species, more than half of which are

P.S. I go to Berkeley tomorrow the end of the week.

new.

I send these lines to Cambridge for the reason that, from all I can gather it seems probable that you are there before now. I hope you have arrived that but cold before this time.

I shall send you a set of my plants, not at once, yet before they are ready for actual distribution.

Do you know that I have never received anything but the proof sheets of your latest paper in which I was and am so much interested? The same is true - nay less than that - is true - of Mr. Watson. I must not be left out, that way!

In great haste, Yours as ever

C. L. Greene.



Berkeley, June 17, 1885.

Dear Dr. Gray:-

Your letter and post-card are just in, as also the pamphlet.

I trust that, when you have once more gone through *Lidulcea* we shall begin to know how large and fine a genus it actually is. There is one of my species which I am in fear about, and that is the one I have not seen growing, namely, the northern one which I called "campestris". Were I doing my work now, I would put it into malvaeflora, that is, humilis of the books.

I have now seen traces of the same pubescence in Californian states of that species.

I am sorry about having

overlooked, or rather forgotten

Marcus Jones's S. calycosa, tho' I doubt if I should have identified it, from his description, with Mrs. Curran's plant.

No: I saw nothing of Lobelia down there: it belongs to the mainland opposite Cedros, 30 miles away where I could not go.

My two Pteroschizias(?) must be very unlike P. macroptera to which you refer me: for that is, like its congeners a prostrate herb. Mine are erect and rigid shrubs. I expect them to constitute a genus; but - I have not yet come to the critical examination of them.

I am just through to the Loasaceae, when I find I have a new Petalonyx linearis, obtained on Cedros.

I shall be mailing to you a parcel  
for Mr. Ball, pretty soon any way,  
not waiting for the arrival of  
his promised reading.

Write to me and tell me so, if you  
think of anything in particular  
which you desire out of our  
reading collections.

I want to say here, that I find I have  
not done justice to the generic char-  
acter of Encarnum. I felt a little  
timid, in the case of E. brevifol. Now  
I regard it as a species in which  
alone the genus might be noted.

In spite of its big yellow corolla, it  
has the dark, muciculate seeds of  
Encarnum proper, as well as that  
naughty tobacco-like touch and smell  
which are always pointing to a  
strong affinity of this whole § of  
Encarnum proper with the Solanaceae!  
Yours as ever  
E. L. Greene

# California Academy of Sciences.

Post Office Box No. 2247.

San Francisco, June 18 1885

Dear Dr. Gray:-

I am mailing to you (registered) a small parcel for Mr. Ball, and I enclose inside the wrapper my two *Phacelias* from Guadalupe, in compliance with your request.

I begin to believe that the small one with such abundance of small, light blue flowers, is what you have made your var. *interrupta* of *P. phyllomanica* out of, but I could not at first think it possible. Any way, the one I have tickited *P. phyllomanica* is a half-shrubby thing often 6 feet high, the other an annual seldom surpassing one foot. The latter is much earlier to flower. The big one was barely beginning to show its dark violet corollas, at the end of April.

There will probably be no use in my attempting to get, from Nevir, a fragment even, of the Catalina plant; but may be I will some day get to that island myself.

I collected no *Phacelias* but *P. nitida*, on either Cedros or the peninsula.

I shall send another parcel to Mr. Ball I hope, before many weeks.

Yours sincerely, S. J. Greene.

Berkeley, July 3. 1885.

Dear Dr. Gray:-

Your card concerning Phacelia has just come. I am confident we have, in our collection here, undescribed Phacelias, mostly in our bundle of "P. taracatipolia". I have shrunk from taking hold of them, owing to my inability to ascertain what is just the original of that species. You have taken out of that, I think more than one good one in the course of the last ten years, as we have also been doing with that former Arizona pocket, "P. crumulata". I hope your newly detected P. distans, Benth. will be one of those which I have been expecting some day to separate from P. taracatipolia. I leave it all to you, however, and am glad to do so, and I am also



gratified & hear that there  
will be a new issue of the  
volume that contains them.

I was about to write more upon  
Ennui, strengthening, as I am  
now able to do, the generic char-  
-acter; but I can give you the  
points, and myself for her, if you  
like.

Yours as ever

L. L. Greene.

# California Academy of Sciences.

Post Office Box No. 2247.

San Francisco, July 2. 1885

Dear Dr. Gray:-

I am deploring daily, while digging away at my L. Cal. collections, that - I can not have access to the Bot. Sulph.

Is it in that that *Franseria chenopodiifolia* is described? Do you think what I enclose will be that species? I send you half I have of it. It can not be your *F. eriocentra*, altho' it must be related to it.

The Guadalupe species which you referred with an ? to *F. bipinnatifida* my specimens show clearly to be distinct. The fertile involucres are globose and 3-seeded! I found it on Cedros also.

Yours very truly  
C. L. Greene.

Berkeley, July 15, 1845.

Dear Dr. Gray:-

Altho' I am now gradually making up a parcel to send you, I will enclose a specimen of Beria Palmeri herewith. It were a pity to find peppus-characters diminishing in value here; but - so I fear it is coming to pass; for ex. I am certain that - those S. Cal. ~~three~~ (Philomeris) are one species. I got them all there, and under conditions that - make no doubt - if they be worth distinguishing as named varieties. I wish I could see the S. Clemente plant; and if Lyon is the collector I can, and shall.

Mrs. Curran is away collecting, down in Monterey Co. whence she is sending some interesting novelties, all of which you shall see before long.

Yours very truly  
O. L. Greene.

And this is P. S. ii. July 17; for I have  
opened your letter to Mrs. Curran.

I send a fragment of Layia graveolens.

I think Dr. Kellogg's from Antioch, of which  
you send a head, may be the same; but  
there is none of it, of his collecting, in this  
herbarium. I also put in a couple

of fragments of what I have taken as  
the L. heterotricha. The very deciduous  
pappus is a fine mark of my species.  
No other Layia has it.

E. L. G.

# California Academy of Sciences.

Post Office Box No. 2247.

San Francisco, July 20, 1881

Dear Dr. Gray:-

Your *Chico Mimulus*, just in, you seem inclined to reckon in with *M. modestus*; but all that sort of thing, and we have plenty of it collected long ago by Bolander. I have put into *M. moniliformis*, as you can see; for I have referred to Bolander's specimens, which you had named for him "*M. monochatus*". The moniliform rootstocks you would probably have found later in the season. At least, I have always found them forming as the plants were going out of flower, in August & Sept. They may perish, for aught I know, with the growth of the young plants in spring. The strong spiral plication of the corolla tube, and the decided elongation of the seed, marks *M. moniliformis* as distinct from *M. modestus*, whose seed lacks nothing but the flattening of its ends to bear it perfectly globular. As for the musky scent: that, I am now convinced, I have made too much of. It is found, Mr. Lyon assures me, in *M. modestus* down his way. I am compelled - I too have been aware of its presence in good *M. moniliformis*; and I am very certain that the more ill-smelling



forms of M. inodorus are strongly musty.  
I noticed it both in Scott Mts. & in the Sierra years  
ago. We must ask our friends to find out  
if the big M. inodorus does, late in autumn develop  
the muriciform rootstock. I do not think it  
will affect it. But if the species is to be reduced  
there is when it must go, or not into M. muscivorus.  
Surely we are obliged to keep the odor character; &  
those of the corolla and seed are, I think, good for  
the maintenance of both M. muriciformis & M. inodorus.  
What I have reckoned as belonging to the latter is never  
according to my knowledge, a small plant. It will  
average two feet high.

I was probably written you enough already regarding  
manis; but I enclose a few seeds of E. Bolanderi & E. crispus.  
Under a good strong lens you will find these muriculate.  
& many other species of Eumaurus proper, show a  
leaving this way; & so does E. (Kinnulastrum) pictus.  
The oily viscosity, and the sickening odor of green tobacco, strong  
in several species, and traceable in every one of the species  
of proper Eumaurus and Kinnulastrum. Benth & Hooker  
knew nothing about it. Probably Mr. Bentham  
if some handfuls of these plants <sup>fresh</sup> had been brought to  
him with his eyes blind, would have said: they  
were solanaceae but for their opposite leaves.  
This would escape the knowledge of the ablest clove-ologist.

but when once known it must be taken into account. I did not make my move audaciously, & show how I could dare set forth an opinion differing from that of the ablest botanists of the century, nor even with the thought that, in future generations, some authorities might take my view. I think no botanist who knows these plants familiarly as we know them who for years has lived among them, will approve of their reduction to Minimus.

It really looks to me like a subversion of all rules for the systematizing of Galearifolia & put under one generic name such corollas of those of Eunurus Douglasii, E. Mohavensis, & Minimus ringens. Surely Bentham could not have done it knowing what he was doing, as you and I know.

It is probably because I have been, for the most part, a field student, and have had ten or a dozen years of almost unceasing detecting the errors of learned men of the herbarium and library, that - I dissent strongly from your view that Benth. & Hook. should have influence with you, as they do have, in this case. But you have their materials before you. You can tell if they had means of knowing even the fruit characters of the considerable number of species of Eunurus, which I doubt.

# California Academy of Sciences.

Post Office Box No. 2247.

San Francisco,

188

In Mimulus I fear there are some errors of nomenclature to be corrected. M. guttatus must take in those annual forms which I ought to restore under M. microphyllus Benth, & also very M. nasutus; for in the south part of the state I found plenty of those peculiar calyces on plants which had not the winged stem nor the small corollas & those well marked specimens on which I thought a species would be well founded. Nevertheless, at all Saints Bay I obtained what was just like M. nasutus in its last shape. The species <sup>of M. guttatus</sup> is, as a whole, almost annual. Taken as a whole there are very few plants which propagate themselves from one season to <sup>another</sup> ~~another~~ by rooting basal joints. I am not sure that I have detected it in but one instance. I will send you more specimens by & by. Diplacus stellatus has foliage of a quite different texture from that of D. glutinosus. It must be distinct. Its corollas are only half as large; nor have I seen that pubescence on any

mainland form.

\* D. pallidus you must not confound with D. longiflorus. The pubescence is very unlike, and the corolla is of quite another cut.

The plant you left on my table as "D. latifolius" is only what I should call the ordinary D. glutinosus. D. latifolius comes from the Sierras (or foot hills of them) and has also its own characteristic corolla.

There is one more point, in Diplacis.

D. purpurea flowers four months earlier than does D. glutinosus, and yet there is not a week's difference between the flowering of the same species of plants, in San Diego, & San Francisco.

Now, both species of Diplacis scatter a few flowers through the whole year: but each has its 6 or 8 weeks of profuse blooming. It is March - April with the southern one & July + August with the northern. The trees & shrubs growing with the Diplaci in both counties (as for ex. Liriodendron agrifolia) put forth their leaves in March, and a week or two earlier (!!!) in S. F. than down yonder. But - I think you admitted the genuineness of purpurea as a species.

I wonder if it is your purpose to put forth the new issue of the Syn. Fl. before winter.

\* D. purpurea from Diplacis in a parcel sent.



# California Academy of Sciences.

Post Office Box No. 2247.

San Francisco, ...

1888

And, if the newest vol. is also to be revised and amended. I hope not yet. New things are coming in too fast. New alterations are perpetually suggesting themselves. I have already in manuscript one thing which I must tell you of. My Helianthoides is the result of a settled conviction which I have been coming to for several years, that your Kuhnioides of Carpophytum is a good genus of Helianthoides. My late trip along the peninsula gave me the means of settling that question beyond a doubt in my own mind. You would not believe me when I told you five years ago that the flowers were yellow; and I see you have rejected the testimony of every body else to the same fact; you could allow them to be "ochroleucous" because that would admit them where Mr. Bentham placed them, in Eupatoriaceae: but evidently neither he, nor you after him, nor carefully noted the akenes, which are such as can not be admitted in Eupatoriaceae. Perhaps you never had them mature. I will send you some, in my Cedar bundle, that are so, and you will see that they

slip neatly into *Helianthoides*, where the deep yellow  
flowers, and the rough, sun-flower smecting  
herbage suggests that the species may belong,  
in spite of the plumose aures of the pappus,  
a thing which is not new in that tribe.

I have named the genus Bebbia; but  
have not yet told Bebb.

What will you think of this?

I have lots of new compositae in M.S. and you  
will not blame me for preferring to print them  
myself first, rather than have them go out in  
your book as "Grass in herb.", if there is time  
for me to do so.

The final query is: Will you ever make your  
way through this very long epistle?

Very Truly Yours

E. L. Greene.

# California Academy of Sciences.

Post Office Box No. 2247.

San Francisco, ~~July~~ July 28, 1885.

Dear Dr. Gray:-

I do not believe I told you that - I believe the stellate hairs on Vetch's specimens of Diplazium stellatum are derived from a Sphaeralcea by some accidental contact. Last winter I suspected it, and could not trust myself to credit them to the species until Mrs Curran, with the help of her microscope, gave me her opinion that they did belong to the species. Now I am sure she was in error. Still the pubescence is peculiar, and the texture of the foliage is most different from that of any other species.

I enclose herewith another fragment, in some respects better, I guess, than what I have already sent.

Thanks for a fine specimen of Eumecurus Parryi, which I received at Berkeley yesterday.

Faithfully Yours

E. L. Greene.

Berkeley, Aug. 3. 1885.

Dear Dr. Gray:—

I am very glad  
to have these Oregon specimens  
of Minimus. Perhaps I did  
not write to you that I have  
already, in my own mind, given  
up M. microphyllus, as altogether  
untenable; partly because my  
this season's careful investigations  
seem to tell that even the largest-  
and strongest forms of M. guttatus  
are seldom more than annual!  
It is actually rare for it to  
produce stolon, that survive  
the winter. In most places  
where it grew abundantly, and  
three or four feet high, I could  
not find a trace of it in February,  
and now it is blooming again  
from seed, in those places

where I had always supposed  
it to exist permanently.

Even the big specimen I sent  
you lately, had grown from  
and this year, and all on  
that spot are now nearly dead.

M. nasutus too I fear will  
hardly hold: I saw so much  
in the South Cal. regions that  
was rather intermediate.

Still, Mr. Quinn sends the true  
thing from Los Angeles, and  
I collected it as true to the type  
everywhere on the peninsula.

Yours very truly  
E. L. Greene.



# California Academy of Sciences.

Post Office Box No. 2247.

San Francisco, Aug 3, 1885

Dear Dr. Gray:

I mailed you one note to-day, and here I come again; this time, a-begging. I have just ended a critical examination of all our *Krynitzkias*, in the light of your revision. Some of the species are wanting. Could you furnish us with as much as a single good nutlet <sup>each of</sup> the following? *K. leucospha*, *K. holstiana* and *K. intermedia*. We have not a scrap of either; but we have several undescribed ones which I probably have not yet sent you.

Mrs. B. Currier, just returned, bids me say she got plenty of her most *cantharidin* the in Monterey Co. and will send you some soon.

I put in herewith some nice fruit of *Eumonia*, *bracteata*, which she has brought from S. Diego Co. You can get nicotine from the <sup>calyxes</sup> ~~fruits~~ dry as they are, I guess.

Yours very truly

E. L. Greene.

Berkeley, Aug. 4, 885.

My Dear Dr. Gray:- Your letter in response to my little parcel has just come. You give me some new light, as well as some old-fashioned scolding.

Now Diplazium according to my view of it, is a most ungrateful genus for me to have the handling of; and my view is simply this; that its species, tho' very good, to the number of at least five or six, are obliged to rest on such (ordinarily) rather small matters of pubescence, texture of foliage, shape and color even, of the corolla. In other words, I honestly believe that, in the matter of even the color of the corolla there is no variability in the species! and the difference in form of

P. S. I am entitled fairly to my advantage in the matter of Casphedon gimenes; for I sent it to you six years ago, and it is a proposed new generic name; you have forgotten, no doubt.

corolla is about the same  
in at least three of them.  
This, I am well aware, seems  
create ground to take; at the  
same time, I believe it will be  
perfectly tenable, and that, upon  
no other theory can the genus  
now be put into acceptable  
shape, in any book. I had  
come to this conclusion before  
I ever wrote the name Diplacus  
in my last winter's MSS.

The observations of the season now  
far past, have strongly confirmed  
me in this view.

As for the "D. latifolius"; I am  
glad to know it came from  
Kentucky; it must then be only  
a broader-leaved state of D. glutinosus.  
But the fact remains, that  
the only specimens I had which  
I dated, by guess, just in a  
shrub under that name, are  
from the foot-hills away back.

2.

of Sacramento, and must, in my opinion be made the type of a n. sp. Their

corolla is of altogether a peculiar cut. I will put a piece in here, when I go over in the morning.

As for your having seen my proposed D. pallidus in S. Barbara, I have no idea that such is at all the case.

I trust, until I see your specimens at least, that you are confounding two of the best species. I know what species grow about S. Barbara, having studied them there, pretty carefully, a year earlier only than the date of your sojourn. They are D. glutinosus, + D. longiflorus, the latter with light-salmon corollas of very peculiar and distinctive cut, and no trace

peculiar pubescence of D.

fallidus, whose corollas, twice  
the size of those of D. glutinosus  
(but of nearly the same shape)  
are almost white when fresh,  
in spite of the fact - that -  
in drying they change to  
a deeper color than those of  
D. longiflorus. My new one  
is, so far as I can discover,  
the only species whose pod lacks  
the little knot at the end.

Now let us see if even the  
pubescence of D. fallidus can  
be found on any S. Barton  
bush! But I think both  
Cleveland & Grout have  
collected just my plant -  
in S. Diego, Ca. back in the  
mountains.

So then, my conclusion is that -  
so long as you can say, "Really  
& seriously, the flowers vary  
from orange to ochroleucous, or



3.

the palest of buff;" you are  
confounding at least ~~three~~ (3)  
very good species; a thing  
which I could never easily excuse  
and submit to, if I had not  
so emphatically pointed out the  
remarkable shape of corolla in  
D. longiflorus which species  
you must have seen lots  
of, right along with D.  
glutinosus, and never showing  
(to my knowledge) the least sign  
of running into it.

Thanks for these little Stimuli  
from Ohio. I had seen none  
quite so small.

You will, I doubt not, ever if  
you run anything into M.  
ovoschatus hear it smells  
musk. I tell you again,  
M. moniliformis + M. pruinoides  
are sometimes so! But - how

By J. S. ...  
can you put M. inodorus in  
as a var. of a species which  
is perennial by creeping and  
rooting stems? If that had  
to go either way I would  
reduce it to moniliformis.  
As for the name of the latter:  
you have the original thing  
as so named by me. If I  
did err in putting some  
smaller forms of M. inodorus  
with it after it was published,  
that is nothing. I see not  
why you should hesitate.  
Some day you will reconsider  
your Rhynitzkia nanosissima,  
and will have to decide which  
one of at least three species  
is to take that name. I speak  
of this because I was struggling  
with that monster all day  
yesterday!

I was going to answer one of  
your little phrases of impatience

with me; but - I have said enough, without - coming & that - so farewell

Berkeley, Aug. 13, 1885.

My Dear Dr. Gray:—

Two days since  
I received your instructive note  
concerning Minulus inconspicuus.  
I knew I had two species there,  
and it is well I abandoned the  
idea of separating them, since  
you tell me one is M. Pulsiferus.  
You confess to having misled  
me by telling me that my  
Yorkia plant (which you now say  
is M. alsinoides) was M. Pulsiferus;  
so my error was that of a perfect-  
foolish in your correctness as to  
your own species.

To-day comes a letter enclosing  
your Minulus inflexuendus,  
another Eunamus which, in  
another five years you will  
have to recognize as a genus. For  
convenience sake, of new species

bearing, in equal strength, the  
lunatus marks, keep coming  
in. This is one I had not  
seen, many thanks!

I shall be instructed by your  
revision of Minimus, and must  
desire benefit from it, however  
hard you sit upon me.

This week I have been under  
temptation of laying violent  
hands on your Gynothamnus!

The species from S. Cruz. Island  
L. asplenifolius, most beautiful  
thing, with bipinnatifid, ferny  
foliage, has stipules, and an  
almost 4-celled fruit; but the seeds  
are pendulous; so if it is to  
go into Vanguelinia you  
shall put it there. But I  
really conclude, at last, that  
the genus must stand. You  
shall see a little of this soon.  
Now will you take the  
trouble of sending me one

a fragment of a Stemmadia  
from anywhere east of Tucson?  
From New Mexico?

I am in sore trouble. I took  
up, and described, yesterday  
two fine new ones of my own  
collecting in L. Cal., both with  
campanulate (tubelike) and  
nearly regular corollas: one quite  
~~glabrous~~ glabrous, the other  
cinerous-pubescent thro' out:  
one with elongated capsule  
(like that of S. longiflorus) the  
other with a depressed, very  
few-seeded one. These fine  
novelties have led me through  
all our series of Cal. specimens,  
to the discovery that we have  
nothing in the state to match  
S. remotissimus as originally  
described and figured.  
From Nevada only have we  
plants with such stamens  
corolla and end. Now I



W. S. I am done, at last, with  
the identification of my Precious  
last spring's collection. The  
printer will be at work on  
the result, before this reaches you;  
and you can soon have me to  
handle as roughly as you think  
suitable.

I suppose we are at Cambridge  
cross & sit down to a solid  
year's work of compiling  
a school manual of Cal.

Returning. May I, then, go  
up that job, and have it to  
myself think you?

I am minded to set about it -  
forthwith! E. L. G.

would be rejoiced to see a single  
good flower, or capsule, of the  
original thing. I hope you  
can help me.  
Mrs. Curran has joined me  
in the work of making up  
the parcel of run things for  
you. She has brought - treasures  
indeed, from her journey.  
Yours as ever  
E. L. Green.

Berkeley, Aug. 26 / 88

Dear Dr. Gray:-

The Gentiana  
Rusbyi did not get  
published. It is a genus I  
have felt timid about, never  
having worked much with it.  
It is too late now for me to  
print it this year, so it is  
left at your disposal.

I hope that, along with this,  
in tomorrow's mail, some  
pages of Bulletin No 4 will  
get started to you.

I will return your  
Krynitzkia fragments,  
such as you asked to have  
returned, in a day or two.

A parcel of specimens  
of some of my ar. sp. goes  
to you herewith, registered,  
and, in the same packet.

another hundred specie,  
for you to forward to New  
for Mr. Ball, whenever  
you can do so.

Very Sincerely  
E. L. Greene

Berkeley, Aug. 28, 1885.

Dear Dr. Gray:-

Already I have mailed you to-day, from L. F. one envelope, and now I come to B. and get your letter with the Nemacladus from El. Paso.

That fragment would not have helped much, for it lacks seed.

I expected to make one synonym.

I feared, and still fear, there is no such plant in the world as is figured for N. ramosissimus Nutt. in Bot. Mex. Bord. Any way, this Lepan will, I think, be my N. rubescens, and that is the one which I feared would "go seed", possibly, as being a synonym of nanississimus. With all very nice specimens with seeds (which have such neat characters and so reliable)

you will not blame me, I hope,  
for the jicadillo I confess.

I reckon that 4 of my 5 must  
stand very secure, and that was  
an opportunity I could not forego.  
There was no time for me to wait  
for a consultation with you.

As for Lymothamnus. Personal  
motives alone would have kept me  
from destroying the genus just  
now. Lyon would not have liked  
it, coming from me:  
it, so I leave it to you; but

I forgot to include a poor  
specimen (we have but one fair one)  
in the parcel, until it had gone:  
then yesterday I enclosed what I  
could, in a letter; but so, you  
have fruit as good as anybody's,  
of this new one at least.

You wrote me, perhaps four years  
since, that Mr. Watson thought of  
putting out a new edition of the  
Bot. Cal. in reduced shape, &c., and



what I meant by my question  
was, to be informed if he still  
has in mind such a purpose;  
in which case I would have  
waited a few years.

Yours Very Truly  
Edw. L. Greene

P.S. The three months lectureship  
I filled in the University three  
years ago has been remembered  
by an appointment (for a permanent one  
"until it can be made a Professorship")  
to Instructorship. \$75 a month  
is reckoned for pay: but it will  
lift me out of the abject poverty  
of my last two years.

Berkeley, Cal. Aug. 30. 885.

Dear Mr. Watson:-

I have  
never yet assured you of  
the arrival of the copy  
of your last Contributions.  
The paper came in response  
to an appeal I made for  
it to Prof. Gray, I guess  
during your absence.

That one sent earlier must  
have miscarried; for neither  
I or Mrs. Curran had seen  
any copy but the one which  
went to the "Educ. Sciences".

It is time, now, that I  
should make my acknow-  
-ledgments; for I shall be  
mailing to you, a day or  
two hence, another number  
of my studies.

Dr. Gray has just copied,  
and sent me a few marginal  
notes on my Distragali, of  
which some have to lose  
their heads, by reason of  
my printer's delay.

We must clear them up  
carefully before any revision  
is made.

He also tells me you mark  
my "Polygonum Douglasii" = ?

"P. covratium".

I thought I had made it  
perfectly clear that my  
P. Douglasii was simply  
the western "P. tenue"; the  
plant sailing under that  
standard, in the Bot. King  
and Oreb. Cal. excluding,  
of course, the varieties,  
especially "var. microphyllum".

Aug 30, '85.

*P. Coarctatum* I have  
always been able to  
distinguish readily, and  
I could never have described  
that - as "glabrous".

My claim is simply, that  
there is no *P. tenue* like  
between the Mississippi Valley  
and the Pacific Ocean; and  
the typical western "*P. tenue*" is  
*P. Douglasii*. You will see  
in my forthcoming paper  
a description of a new form  
relative of these plants - *P. Austine*,  
which grows in N. E. Cal.

I can not say whether a specimen  
went in the recent parcel to  
Cambridge; but if not, you can  
have one; for I possess a half  
dozen at least.

Yours Very Sincerely

Edw. L. Greene.

# California Academy of Sciences.

Post Office Box No. 2247.

My Dear Dr. Gray:— San Francisco, Aug 31. 1885

Monday morning comes, and my "Studies II." have not got into their covers; therefore will not get mailed until to-morrow; but I can send herewith the last pages.

I enclose a branchlet of the L. asplenifolius.

I can hear nothing from the man who collected it. The two or three branchlets and some strips of bark were brought me by a stranger; and he gave me the name of Mr. B. Hazard of S. Barbara, as having brought them from S. Cruz. I wrote to him, but, seemingly in vain.

I return the nulls of Krynitzkia heliptera, which I am very thankful to you for having allowed me to see. Your "K. Pattersonii" from Oregon I had plenty of before. What I was desiring was literal K. Pattersonii. I

shall hope to get it from Patterson. Possibly he may have obtained more of it this year. I have made a sad mistake in saying that Mr. Watson's Costrichium racemosum is a Pseudokrynitzkia; at least, I can now find



no such scar as I seemed to have before  
now when I write. It is a clear  
Eukryptis, and I must bear the  
humiliation.

Yours very sincerely  
Edw. L. Greene.

Berkeley, Sept. 10. 1885.

My Dear Dr. Gray:-

Your note of Sept. 3<sup>d</sup> is here, wherein you suggest that I supply in Errata the lack of the "little word" 'Gray' at the end of the name *Lynothamnus floribundus*. When you have compared my mere comments on species, one note with another, you will find I have, in them, habitually omitted names of authors. I mean, in the paper now nearly out. With what purpose I have done so I must tell you; for it is yourself who have, somewhere, criticized what I think you called a custom of "pedantically" appending authors' names "always" to the specific name; a criticism which, as

I read it, struck me as well  
deserved. It has been with a  
view to profiting by your own  
published suggestion that, in  
those parts of my writing named,  
I have withheld authors names  
as needless. I see that, in  
notes under Eckeholtzia, and in one  
or two other places, authors have,  
contrary to my purpose, and  
through inadvertence, got into the  
text where I did not mean to have  
them.

As for Epilobium heterodoxum, I have  
clearly enough pointed out - the  
one striking peculiarity of the  
species, namely, the declined stamens.  
The open throat of the corolla lets  
the filaments fall to the lower side,  
and their antheriform ends are turned  
up, just as in Polanum.  
That is enough, for people who have

seen both growing and blooming,  
I trust.

I am glad Gilia is to be overhauled.  
We have a magnificent stock  
of material on hand, gathered  
with a view to revision, just  
as we did in regard to  
"Eritrichium" that was. But  
I have not dared think of  
attacking Gilia. Mrs. Purman  
did, but quit before she got  
far!

Yours very truly  
E. L. Greene.

Berkeley, Sept. 15: '85

My Dear Dr. Gray:-

I will go across to the Academy before night, if I can, and see what I can send you in the line of Phacelia canulea. I fear Pursh's plant will not be it: and I think there is at least one of his to come out as new.

It is what I have taken for true P. crenulata which has purple corolla and "nigger smell". P. canulea is of a char. keen stinky odor; has, as I remember it, small (very small) light-blue flowers. I sent it to you from the Silver City hills. You called it P. crenulata, before I published it. I hope some of it is left in your herbarium. It is the



only "P. crenulata" which grows  
abundant near Silver City, if I  
remember rightly.

I am very glad to see Vauquelinia  
concolora. I had only seen V.  
torreyi. I can ~~still~~<sup>see</sup> nothing  
yet, but a greater number of  
carpels, more crowded and  
compressed, than in Lynothamnus.  
Ripe seeds of the latter I did  
not find. As for the leaves,  
I would only say. Have you no  
faith in Humboldt? Would  
he have credited the tree with  
leaves sometimes opposite, without  
having seen them so?

I shall be glad if your genus  
will sustain itself. But I shall  
not be surprised if the next new  
species presents us with three or  
four of those carpels, and leaves  
now opposite, now alternate.

I have heard from Mr. Barclay

Johnston

Oct 1823

Hazard. He promises to  
procure, and press, better  
specimens. Those I had were  
unpressed, and much broken.

I hope I sent a showing of  
the stipules, (small affairs, yet -  
not very deciduous). If I did  
not, there is another twig  
I can send.

Yours as ever  
E. L. Greene.

P.S. I did not get across the Bay;  
but here are flowers and  
immature fruit of the genuine  
thing. I found a duplicate of my  
one in the University herbarium.

Berkeley, Oct. 2, 1885,

My Dear Dr. Gray:-

I shall be  
forfeiting with you any charac-  
-ter of promptness, for the  
last ten days have brought me  
three letters from you which I  
now first find time to reply  
to.

As for my "Enodiostylon Lobli",  
I submit, provisionally, and  
without remonstrance, to your  
sharp words, until I can look  
again at my specimens.

If I am wrong I shall feel  
badly enough.

Now I do find, in the 4 vol.  
octavo Synopsis of H. B. K. the  
Vauquelinia described as having  
its leaves "varissime oppositis";  
so it has not, as you suggest,

an idea first put forward  
by Sir J. D. Hooker.

I judge from this outlet - which  
you send from Dr. Cooper's specimen  
of the *Schistostemum convolvulaceum*,  
that Mrs. Curran's specimens are of  
a plant at which you do not have;  
particularly since you say that in  
his plant the corolla is angulate.

I will send you a fragment of  
Mrs. Curran's specimen when I  
get across the Bay again.

My error here, I think, will be  
only that of <sup>having guessed</sup> ~~guessing~~ a plant

I did not know, to be identical  
with the one I had in hand:

a geographical inference.

Now I am glad you take an  
interest in the matter of specific  
names. I have not read

the discussions by Bentham  
and by DeCandolle. They are

probably inaccessible in any way.

Oct 7, 1895

I have simply followed what seems to me to be the only way, which is not subversive of all rights of priority. Let the Encrypta affair still be used for illustration; and let me ask two questions.

Shall Nuttall be allowed to name an Encrypta foliosa when the plant already bears the name Ellisia chrysanthemifolia?

If you say yes; then I see but one end, a complete giving up of the right of priority in all cases where opinion can vary as to the proper genus.

But will he said "Nuttall was unaware of the identity of his plant with Benthams"? or that "He knew nothing of the prior specific name"? To allow this to be a reason is plainly



to place ignorance above fear,  
is it not? Can science  
allow this? Here is my  
dilemma! Or there men  
who teach us how we can  
escape both horns of it?  
I ask for information.

Yours as ever

E. L. Greene.

# California Academy of Sciences.

Post Office Box No. 2247.

San Francisco, Oct 7.

1885.

My Dear Dr. Gray:-

I am indebted to you for some more Krynitzkia material, all of which is of value, especially the nice specimen of K. litchensis. Your notes contesting my species are also very acceptable. I am glad to have them in this shape rather than in print; for you sadly misunderstand me in some things, partly "mea culpa" perhaps, and partly not so. For example: What need of citing so carefully specimen after specimen of K. cycloptera as "mucronate on back" when I have never asserted anything to the contrary? I have never seen any that were not so; nor said that I had! So please mark that I speak of the "ventral face", namely the spaces between the wings and the scar. That is mucronate in K. plerocarya, and not so in the other. It may not be a matter of great significance, after all; but I thought it worth mentioning nevertheless. The shape and color of the wings themselves are very constant, and suffice, for me.

From my printed note on R. circumscissa I intended you to infer my abandonment of the proposed "R. condensata". Perhaps I did not make it clear. However, that is what I mean: and the R. dichotoma is, I hope, a wholly new affair. I do not think I sent you any of it last year. At all events, I now lend you the only good specimen extant. In this you will see the dichotomy. The leaves are not, indeed, opposite except below. I do not, however, see how we can avoid accepting this as an excellent species. I was sorry, at the time, to have only the poor little plant to give you. Yet even that shows the erect growth, different pubescence, large calyx + nuthlets (smooth) etc.

R. muriculata. In respect to this plant I fear I have gone wrong. All that I have taken for it, I now think must be your R. ambigua. But I do not see how that plant of western Nevada "R. denticulata" can be the "Myrsotis muriculata". Indeed it can not be; and yet, no such nuthlets are found by me in any Californian plant, west of the Sierra. I have been for years, four or five, gathering in from all possible sources, these

plants, but nothing in the *muriculata* line with smooths "deltoides-ovatis obtusis", or even "obtusiusculis" have I seen, save that easterly species, for which I have put forth now the name "*denticulata*". Will you favor me with a calyx or two of your "*muriculata*" from anywhere west of the mountains? The specimens which I had placed under that name, and which I had reckoned on as being that, I send you herewith a representation of. You will say it is ambiguous. I have no doubt.

I would also ask if the *Myosotis muricata* has been surely identified? I wonder at your placing, as the type of your *muriculata* that eastern slope plant, when the plant which bore the name *muricata*, ~~and~~ which A. DC. changed to the disseminate form, must have been from nearer the coast. Of course if the same thing is in your possession from west of the mountains, all right: the difficulty is settled: but, I ought to have seen it too: I have taken pains enough to procure everything that the eastern slope now produces in that line. My opinion is, that the *R. ambigua* will be the plant which should bear the name *R. muriculata*.



and that R. denticulata should stand as the name of a good species which neither Hook & Arn. nor A. & C. knew anything of.

As for the "Plagiobothrys affinity" which you do not see, I only compared its mouthlets with those of P. Kingii which I am not much in favor of having in Plagiobothrys at all; altho' since you have placed it there, I shall probably follow you, in the future, as at present I submit.

Diplacis. In all the capsule, at last, separates into two valves; but not in any, even D. longiflorus in early maturity. In all the two valves stand there, held together at both ends, and spreading apart above only. It will soon be time to gather and send you specimens of Minicatantha which show what its capsule is like when dead ripe; how it remains also, after foliage and calyx and all have decayed and fallen away; just as in Diplacis, so far as texture and permanency go.

I have not answered quite all your suggestions, but I have written already too long an epistle.

Yours very sincerely  
P. C. Green.



Berkeley, Oct. 20. 1855.

Dear Dr. Gray:-

Votes from you, with questions to be answered, are accumulating on my time, while I am so occupied with my university and parochial work together, that I am quite unlikely to give you any more "Studies" & criticism, for a long time to come. And here let me tell you that I am very deeply mortified by one of your remarks, in the Am. Jour. My genera I can calmly endure to have you disapprove; most of them I have proposed in full expectation of all that, (I mean also those of *Natalis* from *Natalis* I have called for) but it does hurt me to see that if you will actually sneer at one of them, that one is to be *Athyrium*. I hold that to be on a par with *Bellia* for genuineness. You do yourself injustice, as it seems to me, in choosing that for your most unreserved disapproval, and then telling the world, in effect, this: that you have to deal with a man who snarles genera on the presence or absence of a wing to the foot! A "wingless *Athyrium*!" Because whoever takes the trouble to read my pages carefully, will see that, unless I have lied, I have been in possession of something

very unlike what a ringless *Thysanocarpus* would be. Such a one might save you from the blame of misrepresentation, by thinking you had not looked to see just what it was that you were condemning. I, for my part, do not suppose you have ever noticed what I wrote, or ever looked to see how very different are the heads of *Thysanocarpus* and *Athyrium*. I am guessing that you have read the name *Athyrium* and thought it told my story, and described my genus. I did allow the absence of the wing to name my genus, but not to characterize it.

Nor, my dear friend, do not believe me to be in an ill humor, because I write so. I am not. You have said kind things, and you have done me more than justice in many places.

So let me take myself to more useful things than crying at my hurt, which will not last long.

By no means do I include in my *Arctiocephalus* any Bell's plants, or San Diego plants of Coville or of any body else. Let the dried specimens go, if you will, for

Oct 20 '85

S. Californicus, but he who sees them  
will know the difference; one will dry in  
three days, the other hardly in three weeks!  
What I have told you this in print. My plant  
does not grow at All Saints Bay even, much  
less at San Diego.

Malacothrix alissima there is but one specimen of  
and that too big to be believed in, until you see it. It  
has no mature fruit. A most excellent species, very  
easily described, so unlike the rest in habit; more  
like our big Stephanomeria to look at.

S. ~~Brandegei~~ <sup>Coronaria</sup>. The man took but one specimen;  
very well marked by its smooth nutlets, and  
deciduousness of plumose part of pappus. May be  
when I go across I can find a few others for  
you.

Hieracium Brandegei. One plant only.

He sent for more, but his man  
returned a lot of something very different,  
also new to us, but clearly H. argenteum  
Kunt. by description.

Cleveland's plant is very type of  
Yonacledus montanus. That has the hairs  
on the stem. I am under the impression

that I thought the seeds, in Mrs. Curran's,  
immature. You now tell me they are, in one,  
3-4 times as large as in the other.

Now let me say that no such plant as *Ip  
figuand* in Bot. Mex. Bound. for *N. ramosissima*,  
is known to me. No such specimen! No  
such seeds!

My time is up for today. Other things  
I will look into for you when I go to  
S. F.

Yours ever

E. L. Greene.

# California Academy of Sciences.

Post Office Box No. 2247.

San Francisco, Oct. 24

1885

Dear Dr. Gray:-

I have back from you my *R. dichotoma*; and you send with it, *cutlets* of *R. musciculata*, which I was in such concern about, wondering that among all our stock of *R. frequenter* there was not a specimen of it. Now we have lots of it, collected, as it seems by Cleveland, Mr. Curran & myself. Where do you think I had put it all? Into *R. Jonesii*! In the happy days of my faith in the infallibility of two or three of my record seniors, you had taught me that the one with long-pointed, rough *cutlets* (*R. musciculata*) was *musciculata*. Hence my error. And now *R. musciculata* & *R. Jonesii* to day, seem to me to be more alike than any two species which I have lately separated. I marvel still at your objecting to *R. denticulata*. I wonder you can not see a wide difference in the character of the *musculation* itself!

I am in receipt of your papers on nomenclature, all of which I have read long ago; but the references you kindly give I will hunt up and study. Yours as always, J. D. Greene.



Berkeley. Nov. 17. 1885

Dear Dr. Gray:-

First let me  
acknowledge the arrival of  
a specimen, from you, of  
Leunoe caerulea; a very acceptable  
accession to the Herb. Cal. Acad.  
for we had none.

As regards the copy of Bot. Sulph.  
I am not able to decipher the  
handwriting of Mr. Oliver; but-  
I infer that you have the copy  
on your hands, or at least that-  
it is on its way to you.

We Californians, be we rich or  
be we poor, do not make ado  
about the price of things, and,  
but for one thing, I should be  
very glad for the news your  
letter brings. I had already

authorized the librarian of the  
British Museum to procure and  
send me a copy which he told me  
he knew of as available.

Unless it was one and the same  
copy which the two men had  
in view, I am likely to have two  
on my hands. But even that-  
does not scare me, so confident-  
am I of being able to get-  
one or other of our public libraries  
to take the extra one, if there  
is to be one, off my hands.

Send me your bill as soon as  
you know just what it is,  
and ~~let~~ let the book come to  
me, at the Acad. Science, S. Y.  
by express, or registered mail.

We are having, after the driest  
of seasons, most copious rains,  
'promising wealth to the money-makers  
and abundant - needs for the rest of  
us. Yours as always E. L. Greene.

Berkeley, Nov. 28, 1885.

Dear Dr. Gray.-

The parcels from Mr. Ball may be sent to the Acad. S. Francisco, by express, or registered mail. I suspect they will each weigh more than four pounds. If not, by mail is best; and we will return postage money.

I am glad your birth-day present is a rare - so appropriate.

One among many unanswered points in your more recent letters, it occurs to me to take up, to-day.

You object to Nicotiana petuniiflora, but you do not deny my character for it, namely, the very shallow rounded, or even obtuse corolla-lobes. In both N. attenuata and N. Bigelovii these are very sharply angular, or pointed!

I have no specimen for you. It was but just coming into flower and I got but two in bloom - nay, one only; but as one who sees the corolla, knowing that the others, will question the validity of my species: that is certain. E. L. Greene.

Berkeley, Jan 5, 1885.

Dear Dr. Gray. -

Your letter  
with the stamps has come.  
I blame no one but myself  
about the cost; and that was  
nothing much more than  
I might have expected, save  
that - the box was made of too  
heavy, perfectly green and wet  
pine boards; so that the  
whole weight was fifty pounds.  
It was only the pitiable scraps  
instead of desirable specimens  
which made me feel the cost.  
I discovered, accidentally, some  
weeks since, that my impression  
that you were following B. & H.  
in that matter of authors of  
genera, had been very incorrect:  
so your words to me only

intensify the feeling of humiliation which I had already been suffering on account of my too hastily appended note. But I deserve it all.

I have a habit of thinking of you (and so have others) as the authority that is speaking always, in both volumes of the Bot. Cal. I know this is unwarranted, therefore I accuse myself, for having read the "Myosurus, Linn" to your credit (or debit).

Rest assured that this blunder will teach me to be more careful what I say. I do not, however, believe anything will teach me to reverence a certain British trait which expresses itself so strongly in the Genere Phedonum, or to be tolerant of it.

It was bad enough for the



Jan 5, '86

brilliant, sprightly and highly  
gifted Swede to go on so  
recklessly ignoring, as he often  
did (whether he meant it or not)  
his predecessors and contemporaries,  
some of whom appear to have  
been, in some points, his betters;  
but I feel confident these men,  
in order to save themselves trouble,  
have done more deliberate and  
unpardonable injustice to great  
names, than Linnaeus ever meant  
to do.

Surely, my judgment could be  
that, ante-Linnaean generic  
names ought all to be restored  
to their proper authors. But,  
altho' I know nothing at all of  
what may have been thought or  
said upon this point, I can  
imagine difficulties almost  
insurmountable in the way of

such a consummation.

I shall hope you will tolerate  
my Rumicaria. I am unable  
to comprehend how you could  
allow in Rumicaria, a plant  
whose fruit you admit (if I mis-  
take not) to be not an uterine  
but an extricle. I write this  
without having your original  
account of the plant near me.  
Wishing you health and peace  
for the New Year, I am

As Ever Yours

D. L. Greene.

Berkeley. Jan. 22. 1886.

Dear Dr. Gray.-

I have never seen a Californian specimen of Draba crassifolia. Can you furnish me with one, even a small one? You have collected it yourself, above Yosemite, according to Bot. Cal.

I should also rejoice to have some fragments of your D. eurycarpa which also has been obtained by a single collector only, namely Brewer.

Thanks for Bot. Neurology for 1885, just received.

Yours very truly  
Edw. L. Greene.

P.S. Draba Douglasii is another desideratum!

Berkeley, Feb. 1. 1886.

My Dear Dr. Gray--

Your rather long letters of yours are before me, on the subject of Kumtienia. In the first of them you blame me for not having submitted my paper to you before printing, adding, that the genus "is not likely to be approved".

In the second you counsel for the suppression of the page that contains it.

I am loath to write back words that may sound unpleasant; but it may perhaps save us both considerable tiresome discussion if I here, once for all, and very frankly, put down some of my reasons for doing as I do. Up to a year and a half ago I had almost always submitted my little affairs botanical to you, with an unquestioning faith that you would do what was right, whether you approved, or disapproved. When, at length, I was ready to undertake a little piece of work which I thought could really count for



something, I confidently informed you  
of my purpose. You replied: "Let me see  
your new material" \* "Let us have a fair  
understanding as regards genus, then go ahead."  
I went on, sent you my specimens, indicating  
the limits, according to my notion, of Plagiobothrys,  
upon which my mind was already made up; yet  
not venturing any other unsettled views of other  
allied genus. You were long silent. Then  
came this rather surprising remark from  
you. "Inasmuch as I am responsible for  
the putting of Plagiobothrys and Cryptotaria  
into Eritrichium, I ought to take them  
out." This was followed up not long after  
by the promise of "proof in a few days".

I am doing you, now-a-days, the credit of supposing  
that you have forgotten just how you treated  
me. I take it you have destroyed my letters  
and have forgotten what yours to me contain:  
else you would not suggest to me again, that  
I lay my little projects before me: for you  
are not likely to attribute to me such weakness  
as to remain unaffected by so grave a violation

of the very fundamentals of scientific justice  
and good faith. No; I believe you have  
forgotten. But, no matter about that. My own  
interests will forbid my doing again what  
you wish. I could, I very well know, profit  
greatly by your advice. It is inevitable that  
I shall make some mistakes which I could  
avoid if I had the happiness of a free, confiding  
correspondence with you who, in point of  
wide experience and profound scholarship, are  
without a rival, as I judge, among living  
botanists.

Now, at last, I have said that which I have  
long hoped I should never feel called on to say.  
But I think it was best.

As regards the suppression of the pages upon  
Kandieria, I may as well continue, and  
annunciates some things which you have not  
taken for granted. I do not look for  
your approval of any thing whatever  
which I print. He who attempts, as I am  
now beginning, to set forth now and then, a  
view at variance from yours, is bad.



Off, if he have not faith and patience,  
to suffer and to wait. I suppose  
that the final judges between you and  
me on such questions as those of  
Euonymus, Diplazium, Rumicinia etc are  
to be men of some future generation; men  
who shall know Pacific American Botany  
as Linnaeus and Fries knew the Flora of  
Scandinavia, and as the Browns, Hookers  
and Benthams, that of the British Islands.  
I am well aware that your approval  
would be worth everything if I had no  
faith in myself, and was working to earn  
the praises of my botanical friends and  
correspondents. I perceive it is in your  
power to exalt a man, in the estimation of  
the scientific public, to very high rank as  
a botanist; and that you can as easily  
relegate him to the limbo of conceited  
"cranks". You appear to have decided  
how you will dispose of me. You gave  
a sample in Silliman's Journal not long  
ago. You hint that more is to follow.

Feb 1, '86

I am really sorry, on more accounts  
than one - sorry for the sake of the  
time that will be lost to you, and  
sorry for what I must bend my  
luck to receive. But my work  
will go on all the same; and, as I said  
before, the future will have to judge  
between us when we are at variance.

I have not time, after all this, to answer  
more particularly, and practically, some of  
your questions. You ask, for ex, if I  
have fruit-ripe, of Kumbieria. Is it  
because you do not possess it, and wish  
to have some? I can not tell. Ripe  
fruit I can send you if you need it, at  
all events.

Yours Very Truly

Edw. L. Greene

Dear Mr. Greene

Your letter of the 1st inst. came this morning, and requires a prompt reply - I cannot make it very detailed, but I mean to make it explicit.

You have brought forth your grievance, which if warranted, should change our relations of correspondence, and which you should have seen to before today -

I knew you did not like my setting at work anew on Boraginaceae when I did - But I did not know that you took me to have committed a "grave violation of the very fundamentals of scientific justice and good faith." I think you have forgotten the facts. The essential fact is: that my change of view about the genera in question, and my determination of my duty to act upon it, antedated your communication of a specimen of the typical *Plagiobothrys*, which up to then I had never seen. When your specimens came, I promptly informed you that I had it already from Howell. I am confident that my letter at that time stated that -

As it required a very large overhauling of very special work of mine - mostly in reshaping, - as I knew I had or could have all the means & appliances for the revision, and



You had not, and as I was not put upon the track by you - tho' you came in soon after, - it was I think natural that I should apprise you that as I had put *Olajobothrys* into *Entrichium* myself I proposed to take it out - If after this reclamation, you think I have violated good faith or done you wrong, you could no longer wish - nor I allow - our correspondence to be any thing more than that of strict botanical interchange. If you are convinced that you do me a gross wrong, you will say so, and will also disabuse Parny's mind, if, as I have some reason to think, you have given your impressions to him -

In my last letters I ventured in a frank, friendly way, to offer some botanical advice, from the adoption of which I could not possibly be at all advantaged - which any one would see was dictated purely in reference to your own scientific reputation. I thought you would take it in that spirit, I think, on reflection - now that there is of course an end of any free criticism and advice, - that you will feel that I have done you friendly service - I feel that I have never done you any other.

As to my published criticisms - of course I had to say that I did not think you were quite right nor wise. At least one of my correspondents wrote me speaking strongly

of the kind almost deferential way in which I expressed my dissent - I know that I took pains to avoid every harsh turn of phrase

I mean to treat you with complete consideration. I shall save valuable time & your temper, by avoiding for the future all "tiresome discussions." I am convinced that I should have done so long ago. In wishing that you had informed me in advance of publication of your *Kumleinia*, I thought I <sup>might</sup> ~~could~~ have saved you from what you could have seen - on a survey of the genus - is ill-judged - But why should you not have your own way unmolested?

I remain till I hear from you again,

Your friend,

Asa Gray -

Just arrived

Berkeley, California  
Feb. 3, 1886.

My Dear Dr. Gray.-

I did not yesterday, take time as I thought I should, to go through the *Ranunculi* again, in search of bladder-jerocarps. Surely, I have seen no New Zealand species; nor even *R. Andersonii*. I have very likely erred in the direction you indicate. But you too are, on the other hand rather given to assuming that one out this way has no means of knowing anything at all about foreign botany. I remember how, when I told you once that I had found one N. Am. plant quite unlike *Tropaeum Chileense*, you came back upon me with this most presumptuous question, "How can you tell without seeing South American specimens?" I have reason to suspect that, upon Chilean botany, I am even better furnished than you are with specimens. Of Old World *Ranunculi* I have also the means of knowing something; enough to perceive



that there is room for much doubt about the limits of the genus. I should certainly want *Cyrtocarpus* and even *Ficaria* to stand, if I had a vote. But I reckon always that European botany is best off in the hands of Europeans. I might also add that I am more inclined to Nuttall's view than that of Atlantic and European botanists concerning *Cyrtocarpus*, altho' the habit, a point of which I incline to make much, (as I think every man who is not an artificial systematist will do,) is clearly that of *Ranunculus*. Now as regards *Humbertia*, I should lose faith in it surely, if I found the pericarp of *R.*

*Andersonii* to be thin and brownish, rather than green and not translucent; yet even in that case it would want the peculiar shape which helps to give character to the carpel of *Humbertia*; for that is not bladder-like in the sense of seeming to be blown up. It ought not to be called utricular in any such use of the term. I am justly censurable,

however, in letting my pen say that in "all" *Ranunculi* the seed is everywhere in contact with the pericarp. That is not quite true, I guess,

in even *R. Lemmonii* and *R. glacialis*. I fail to understand what *R. Cyrtocarpus* could teach regarding *Humbertia*, altho' its carpel is a little abnormal, if not in that direction. And finally, let me say that my eyes are as wide open to catch general resemblances, and my mind so habituated to thinking of them as (with of course noted exceptions) of prime importance in getting at the true relations of things, that I nearly cease to regard as other than an artificialist the man who puts side by side under a sectional name *R. hystericus* and *R. apifolius*.

Now I am not without a fear that such plainness of speech may offend. You are well accustomed to be praised; and I have power, or wish even, to become a discordant voice, nor any intention of becoming a scent annoyance. But I am going to request of you that you try to think of me as a man of two and forty years, a worshipper of plants and trees from my boyhood, and one whose veneration for any great name in botanical science long kept him from venturing to set forth any opinions of his own.

I make some mistakes - mistakes that I  
am greatly ashamed of; and you, in telling me  
of them, tho' you do it harshly, and with the  
tone of a master to a small school-boy, will be  
better to me than if you praised me when I  
deserve no praise.

I have sent the money to Mr. Worley, but I hear  
no more about the book. However, the Smithsonian  
people are trustworthy. It must come some time.  
I shall be interested in seeing what you may  
have done with all the *Myosurus*. I hesitated some  
time between reducing all our *M. capulatus* to  
forms of *M. minimus*, and doing what I did.  
We have good *M. apetalus*, Gay, but its fruit was  
too like *N. Arn.* *M. aristatus* & *denon*, in my  
estimation varietal distinction.

Now I will conclude with a fair promise of  
writing you no more long letters for a while.

Yours as ever

E. L. Greene.

Ames

Mr

Ames

Feb 7

Berkeley, Feb. 10. 1886.

Dear Dr. Gray:-

I had got almost ready for the printer a few new polyptalae, in which are three or four Ranunculii; but I shall doubtless wait now a couple of weeks, and hear if you really will have this which you ask for, to be R. ophioglossifolius. My specimens of that species lack ripe fruit; but I judge this Cal. plant to be distinct on account of its very few stamens on long and flattened or dilated filaments, as well as elongated heads.

Doubtless you have from Bolander what I have called R. Bolanderi in my M. A. It is not like R. Flammula to which you seem to have referred it (you or some one else) but closely resembles R. Lingua and has its ample leaves marginally adorned with blunt, somewhat revolute callosities. Its stem has a slender, straight bark also, most unlike that of R. Lingua. It is from "Long Valley Mendocino Co."

Of any R. adscendens there is, I suppose but one specimen extant.

7- this matches



I send a few ripe cherries. Its <sup>habitat</sup> is the higher Mts. north of Mohave Desert. It is polypetalous like R. Californicus, but of different aspect and different fruit. The polypetalous "R. Californicus" is a clear species, and, in M. S. I have given it, with hesitancy, the name R. canus, <sup>Benth.</sup> all the while wondering if Benth. could so have misapplied the name canus.

I have also remarked that the "R. alismifolius" of the Pl. Hartw. must be R. Lemmonii (!) for no other of that group is found west of the summit of the Sierra Nevada.

Now I will wait for suggestions from you; since you are really going carefully over the same ground, and that with herbarium advantages largely in your favor, no doubt.

I am going out this morning to Angel Island, on my first botanizing excursion for this new year. The rains have been abundant, and we have had no frost this winter; so that we are sure of an excellent season for gathering in plant-knowledge and material.

The Bull. Cal. Acad. 4. with index to whole volume goes to you to-day.

Yours as ever

L. L. Greene.

Berkeley, Feb. 27, 1876.

Dear Dr. Gray—

The Syn. Fl. Supplement  
has been received; also, now, your citations  
of Syn. Fl. on Ranunculus.

Since you appear to have been able to run  
our Caliz. and the Texan "trachyspermus"  
both into pusillus, I shall withdraw  
all I had written concerning it.

You say you can have for me, soon, a  
print of what you have done with  
these things. Of course I desire  
it; but there is no need of any haste.

It will be sure to come out—sufficiently  
in advance of my Handbook, which  
I never had any idea of being able to  
compile in a winter, or even within  
one year.

Yours very truly

Edw. L. Greene.



# California Academy of Sciences.

Post Office Box No. 2247.

San Francisco, April 13 1886.

Dear Dr. Gray. -

Yes: my Ranunculus Ludovicianus is the very same of which I sent you akenes named R. adscendens. (I had forgotten that there was an R. adscendens already). The akenes sent you were some that lay loose in the paper, therefore the very largest and maturest. The petals are of the same number as in R. Californicus, i.e. 10-15. I wait to see what you will do with our 5-petaled "R. Californicus" which certainly is entirely distinct from the many-petaled one; and I am trusting it will prove to be identical with R. occidentalis. Nutt.

Yours Very Truly  
Edw. L. Greene.

# California Academy of Sciences.

Post Office Box No. 2247.

San Francisco, Apr. 26. 1886.

Dear Dr. Gray.-

I mail herewith all the material we have to spare on delphinium which I think can serve you. Bot- characters are not so marked as one could wish.

You will see, however, what I think we have not yet remarked, that we have one species whose follicles are divergent- as in the eastern d. tricorn.

I have included a couple of N. Mex. plants which I may or may not have sent to Cambridge years ago, about which I am somewhat in doubt.

This is an uncommon year for Microseris: coming right after the heels of all the work that has been done therein of late years. The abundance is surprising, and I am studying them more intelligently than I could have done before, and I am finding out some of your and my mistakes. A great desideratum now is, ~~not~~ an abundance of original d. Bigelovii. Can you send me one, from

# California Academy of Sciences.

Post Office Box No. 2247.

San Francisco,

188

Bigelow's *Coste Madras* specimen?

From the figure in Pac R. Rep. it would  
be a species to go in with the group with  
boat-shaped valves; yet, all which I had  
been taught - to call M. Bigelovii was flat-  
valved.

Yours Very Truly  
Edw. L. Green.

P.S. I am plain Mr. E. L. G. &c; not "Rev."  
having some months since taken the place,  
which I mean to keep, of lay member of the  
Roman Catholic communion.

E. L. G.

# California Academy of Sciences.

Post Office Box No. 2247.

San Francisco, June 2 1886.

Dear Dr. Gray. -

In response to your request, I send you my very best duplicate of the Meconella denticulata. None of them were in fruit; and, as you desire chiefly to see the flower you will be content with this.

Mrs. Curran turns over to me your card & her concerning Platystemon. I have studied the species with diligence, often thinking there must be more than one. But I can not find characters. The flowers close at night and open again; but I can not say for how many successive days. We could furnish you specimens, if you were in need, showing all the petals firmly persistent when the fruit is nearly ripe! In other cases they seem to be quite deciduous, never, however, as they caducous. Do you possess specimens with the peduncles nodding in fruit? I believe they are always so in the south parts of the state.

I have received your paper on Ranunculus &c. also the letter which accompanied it. As regards titles, you shall call me what you please. My students are not allowed to call me Professor, because I am not so entitled; although of course I should like to be.



And "orders" you thought - were held "indelible"; and so I had also been instructed. I doubted, a half year since, whether I had ever received "Holy Orders". My reasons for doubting that, were rather general than particular. I have never yet given a half hour study to the question of Anglican Orders. But all doubt has given place to a feeling of certainty. I know one thing, namely, that - the sacraments, in the Roman Church, are accompanied by interior effects which I not only knew nothing of as an Anglican, but which were a surprise to me from the very first. So while my renunciation of Anglican priesthood was made because the Roman Church would not permit me to exercise it; I am now interiorly convinced, as I never supposed it possible to be convinced, that priesthood I never yet have attained to. And thus have I responded to your pleasant banter on that dogma.

But, to go back to our botany: can you favor me with something in the way of a specimen to show what the real Delphinium simplex is? I may also add, that D. serotinum is surely an excellent species; and if it must, from your herbarium material, be compounded with some other, it should be D. cardinale which it is much less unlike than it is unlike D. nudicaule.

Yours Very Truly R. L. Greene.



Boston, June 10, 1851.

Dear Dr. Gray, -

*Massachusetts* as there is but one specimen extant, of the *Argemone conyzifolia*, I think you ought to see it entire. It will be worth all the trouble; so I lend it to you. I go over to the Acad. in the morning, and I shall register it to you; so it may reach you a day later than this. Mrs. C. has not a quick eye, and is very apt to bring in some hundreds of seeds away, a single specimen of what may be a strongly characterized new species. Of the *Eschscholzia glyphostemma* which she got at the same time and place as the *Argemone* there were two specimens, and the second, an inferior one, I am sure I sent to Mr. Watson; so that you will not need to send further for new, the other is *E. Austineae*, which Mr. A. saw. Mr. R. even obtained more than one or two specimens each, and another lady could tell, when I was ready to describe it, where she obtained it.

A month ago I rediscovered it,  
and am well supplied; so I send you  
some of it to keep. You may also  
retain a good y<sup>d</sup> of the Argemone; but do  
not spoil the corymb. It may be  
years before any one will find, and  
collect the plant.

Yours Very Sincerely  
Edw. L. Greene.

# California Academy of Sciences.

Post Office Box No. 2247.

San Francisco, June 18 1886.

Dear Dr. Gray.-

On opening the bundle of *Argemone* I find there is a second, but poor specimen of the Mohan plant; and that I send you entire; and you are to keep it. It shows leaves and pods both, altho' not the strikingly corymbose inflorescence. The remaining specimen, (out of flower) spreads out at top, into a slightly convex, cymose corymb of twenty seven pods; and the stem is perfectly undivided up to the corymb.

In the new *Lasthenia* you will find no fruit character, altho' the involucre is different; but it is, in the field, a striking species. I found it just coming into flower when *L. glabrata*, (which is associated with it) was going out; and at the time of my collecting the plant. *L. glabrata* was dead and gone.

The broad leaves are always ascending (horizontally spreading in the other) and are so much wise connate as to form a conspicuous open cup.

Yours E. L. Greene.

San Francisco, Cal. June 27, 1886.

Dear Dr. Gray.

Last-Monday I went down to Crystal Springs, one of the sources of the water supply to this city. I had never been there; and I guess no collector was ever there at this time of year, for I found a most remarkable thistle which is evidently new. I found one a head, preserving a good specimen for the next parcel that may go to you. This discovery awakens in me a strong desire to have something more than a description by which to identify C. Andrewsii in case that rare and obscure plant ever comes to light again. Can you send me at least a few scales or bracts of an involucre of it.

My new one is confined to the springy ground otherwise occupied by Mimulus, Juncus, & Spilobium. On the dry stony places, above the spring, grows plenty of C. quadratum. This new one is also a diaspik plant, with all its heads nodding; color of corolla, dirty white. The strange, glaucous, new, red bracts led me at first to suspect it of being some

foreigner; yet, such it can not be. It must  
be quite local, I think.

I am to be off in a week for the S. Barbara  
Islands! I shall come back rich if  
only get good material of Lepanostemon,  
asplenifolius and Eriogonum arborescens, which  
I have already published from scraps brought-  
in by unbotanical visitors.

Are you not coming west sometime this year?

The bad cough you complain of in your last  
should indicate a retreat to the wholesome air of some  
of our mountain districts - when you know you can  
work also in botany to advantage.

I hope, at all events, the summer weather may  
cure you.

Yours Very Truly

E. L. Greene.

P.S. I shall be absent for about three weeks.



The island is more like Guadalupe than like California altho' it is only 25 miles off shore; but its vegetation is more abundant and varied. I have a list of 215 species of phanerogams + ferns, and I have explored only about a tenth part of the area. The tendency to arborescence, in plants commonly more shrubs, or herbs, is the most striking peculiarity. Dr. Kellogg's Leptocarpus gigantea is a fair illustration: as tall as a man, with trunk 2 or 4 inches thick and branches 1 or 2 inches, and ample compound panicles produced at the ends of the branches: and along with it a Hemlock of equally surprising proportions: leafy stems and branches 1-2 feet high, and numerous axillary, short-peduncled thyrsi!

Santa Barbara  
July 28, 1886.

Dear Dr. Gray.-

In one of the letters which came from you not long before I left Berkeley you expressed the thought that my Eichscholtzia Austriaca might prove to be the true E. hypocoides. I am prepared to see that venerable name eventually displace some one out of several which I have made: but I was more inclined to think my E. rhombipetala would prove to be the synonym. Then again arises, in my mind, the question of the San Diego annual species which is surely distinct from E. Californica. I have referred it to my E. peninsularis, but I doubt if I was right.

It does not at all well match  
Greville's specimens collected  
in India <sup>on which I based my species</sup> on the peninsula; and  
the *E. bigo* plant is annual,  
fruiting in March & dying in  
April.

To return to *E. Austinae*: it  
does not seem to me that  
*E. hypocoides* can be that, for  
any author would mention  
the pubescence: and yet, I  
have put in with my pubescent  
type, certain small specimens  
which are glabrous, yet-  
otherwise apparently the same.  
I make mention of these things  
because you said you expected  
to see the originals of the  
Hookerian and Benthonian  
species, and I fear they  
may reach you, be examined,  
and returned to Kew before  
I am back home and

ready to send you more  
material.

I can not, this morning, say  
whether I have or have not  
yet published as a species  
my *E. elegans* var. ramosa:  
but it is very distinct, and  
one of the best marked of all.  
I have now more of it, and  
from certain island rocks  
off Santo Cruz. It is  
strictly maritime; for at  
Gradalupa I found it only  
near the water.  
I have spent three weeks on  
S. Cruz, and expect to return  
to-morrow, for another ten  
days, to another part of  
the island. It is very late  
for botanizing there, yet so  
very interesting, notwithstanding  
that all the spring vegetation  
is dead and gone.

July 20, 1881  
The two Ceanothus observed are  
peculiar and one of them a  
tree of great beauty, the  
ample foliage white beneath;  
height 20-30 feet and  
strictly tree-like: no bushiness,  
but a clean, smooth trunk  
and well rounded head, the  
one really noble species of its  
genus. Two Eriogonum  
appear; both shrubby and  
peculiar. There are pine  
oaks, one of them new; one  
pine, but no other coniferous  
tree or shrub whatever!  
The Castilleja & the Horackia of  
the island are also great-  
stemmed shrubs 3-6 feet high,  
and so on through my list  
of at least fifteen new  
species of which good  
specimens could I had at this  
late time of year.

Since I began with Eschscholtzia  
let me end with Sundomum.

I always believed in S. Harfordi.

Well, even from the poor  
fragments first collected. You  
could not ask for a more  
clearly defined species. It is  
a tree, and, & with its drooping  
boughs, weighted down by the  
large fleshy glaucous leaves,  
no one would think of it

as a var. of rigidum. Yet, as regards identity,  
I may be wrong: for if, as my  
memory seems to tell, Harford's  
plant was from Santa Rosa

Island, and a low straggling  
bush, my Santa Cruz tree  
may be a third species. Its  
seeds have are sides covered by  
a white aril or strophiole  
which there is little or no  
appearance of in S. rigidum.  
I mention this so that

in your M.S. you shall  
have room for more  
Sundomums than one.

I shall send your specimens  
as soon as practicable.

Yours very truly

Edw. L. Greene.

Santa Barbara

Aug. 1. 1886.

Dear Dr. Gray.--

I wonder if my  
chirography is growing as  
bad as yours? I certainly  
meant- to be read Cnicus  
Andrewsii, and am therefore  
disappointed by your very  
nice involucre of, and full  
comments upon C. Andersonii  
which I have, for some years,  
been familiar with.

This in haste, as I am starting  
again for S. Cruz. I hope to  
be in Berkeley again by the  
middle of the month.

Yours sincerely



of several more novelties,  
mainly Compositae; and I  
wish I could stay longer; but  
at the end of another week I  
must go, so as to obtain  
at least a fair beginning at  
the critical study of my collection,  
before the college year opens.

Yours very truly

Edw. L. Greene.

Island of Santa Cruz  
Aug. 8. 1886.

Dear Dr. Gray.- I am in  
no little trouble regarding  
Diplacus, and am about  
to ask you for help.  
I have on this island a very  
clear new species; acres  
and acres of it. It has  
quite ample, rhomboid  
and crenate, smooth leaves,  
and a very slender and  
small red corolla with  
incredibly small and  
hardly at all spreading limb.  
It is not this new one that  
is worrying me, I can not  
make a synonym in  
publishing it. But -

am in a bad state of mind  
regarding the old species;  
and, it is now very clear to me  
that - I must find out what  
Nuttall had for his D. glutinosus.  
I suppose I have erred by my  
faith, and by my ignorance,  
in taking the S. F. Bay plant  
for the typical D. glutinosus.

Certain I am that my  
Lower Cal. "D. arachnoides"  
is plentiful both on this  
island and at S. Barbara,  
at which latter place Nuttall  
must have seen it, and it  
will as surely be the type of  
one or other of his species.

Now what I will ask of you  
is this: that you engage  
some youth in your college,  
who will like to do such a  
little task for whatever money  
it is worth, to transcribe

and send me a copy of  
whatever Nuttall did upon  
Diplacus. This I ask,  
taking it for granted that  
your library is not destitute  
of the "Taylor's Annals" in  
which, I believe, Diplacus was  
published: I suppose it  
utterly vain to hope for an  
opportunity of buying, at this  
late date, the magazine  
itself.

Can you intercede for me  
in the way I have suggested?  
I shall be willing to pay  
a reasonable, or even perhaps  
unreasonable price for an  
accurate copy of this article;  
and I think it not improbable  
that you may have almost-  
at your elbow, some student  
who may do me this service.  
The last week has been painful

Berkeley, Sept. 16. 1886.

Dear Mr. Watson. -

My stay among  
the S. Barbara Islands was prolonged  
far beyond the time at first  
allotted, and I am just now  
returned.

My Streptanthi were easy to get  
at, and I have already laid  
aside for you specimens of both.  
Tomorrow I must try to hunt  
out from the midst of very  
confused parcels the Eschscholtzias  
which Dr. Gray has asked for,  
put them in along with what  
I am sending you, and then,  
for the sake of your Cruciferae,  
the parcel shall go, without  
waiting for many other things  
which you are to have if you  
desire them.

Let me say in behalf of my  
Scrophularia purpurea that  
you must not expect to find  
the real character of the calyx  
obvious, or even well perceptible  
in dried specimens. This whole  
group, for a cruciferous group, is  
difficult to understand without  
seeing the fresh flowers.

Regarding Cardamine cuneata  
W. Carr has replied. There are  
no specimens at all nearer  
maturity than those I sent to  
Cambridge at the first.

Your queries about Thelypodium  
neglectum of Marcus Jones are  
somewhat perplexing to me.

You say that - "I say it is com-  
mon in California". Jones  
in his discussion of its merits  
says it is found at San Francisco  
+ Santa Cruz, and he does not  
mention its occurrence in



Sept 16, 76

Arizona, whence, you say  
most of what you have under  
that name comes. Again;  
you ask "Who has referred it  
to disymbrium?" To which  
I must reply: nobody that I  
know of. I merely meant  
to append it as a synonym  
of T. lasiophyllum; for, from  
Jones description and habitat  
it must be the same, and one  
of the common, large forms with  
pods not-reflexed. The printer  
has made perhaps a misleading  
blunder in the atrocious way  
in which he has made a  
paragraph of T. neglectum, &  
so made my comments  
susceptible, perhaps, of being  
read as if referring to Jones  
plant! Imagine that  
name of his put in closely



as the last of the synonyms,  
then here my remarks from  
the paragraph + you will  
understand me. I was  
when the proofs could not  
reach me, + so this piece  
of awkwardness became fixed  
beyond easy ~~re~~ rectification.  
Of course, according to the  
Benthamian opinion to which  
you so unhesitatingly subscribe,  
G. neglectum, Jones, is to be the  
name for the species, provided  
his plant - is identical with  
Sisymbrium reflexum.

I am as strongly on the side of  
the party who are insisting that  
the very first specific name  
of a plant - is to be used in  
defiance of every other, save  
where ~~it~~ it is already in use  
in the genus to which a species  
is transferred. On this some

score I drop the Italian specific name for Phanicaulis while retaining the genus. By the way, I must say I did not think and do not see how, pods of such different-shape as those of Phanicaulis & Parmyza can be admitted in the same genus of Cruciferae.

One request and I will conclude.

I am sadly afraid I shall never see what your Thysanocarpus erectus is like unless you send me at least one samara together with a pencil tracing of some part of a specimen.

The last will show me the precise angle of divergence of the pedicels. Of course they can not be literally erect.

I have a little poor material  
of a new one from S. Cruz, (I  
hope I shall find it - in  
a few days) in which the  
pedicel, is straight, but  
divaricate, not erect.

Please favor me in this  
matter and believe me

Very truly Yours

Edw. L. Greene

~~Exochordaceae~~

Berkeley, Sept. 18, 1886

Dear Dr. Gray. -

My first little piece of work, after my tardy return from those islands has been the making up of a little parcel of *Cruciferae* which friend Mr. Watson had asked for many weeks ago; and I have put in with them the desired *Eschscholtzias*, and one or two other things which fell under my eye while I was getting out the same. The *Lycocotthamus* fruit is fairly mature and will gratify you by confirming fully the view you have taken of the affinities of the genus. It is a most beautiful tree and one wishes the name had been *Lyonodendron*. About the *Escholtzias* I need



to remark that the two un-  
named specimens I set pass  
for states of *E. Californica*  
inasmuch as both are furnished.  
The one from San Miguel will  
strike you, with its white  
hubsence, or incrustation,  
or whatever it may be, as very  
peculiar; but it passes fully,  
on San Miguel, into the normal  
state, being more commonly  
quite glabrous.

Of the luxuriant one from  
S. Cruz I have better specimens  
somewhere, but I can not  
tell in what part of my heap  
of parcels to look, and I  
undid a half dozen, in vain  
search. This is really, when  
growing strongly and healthfully,  
a plant of different aspect, from  
any other known state of *E. Californica*;  
still, I do not regard it a species.



The ~~annual~~, named E. ramosa.  
 (and you did not answer my  
 question whether I had sent it  
 to you from Guadalupe) is a  
 most peculiar species in habit.  
 It is like a compact little  
 tree in shape, flat at top,  
 with its little greenish flowers  
 and large, straight-(!) pods  
 borne on one level. See others  
 of the genus (except E. elegans)  
 are loose, straggling things,  
 branching from the root, (as  
 this never does) and the branches  
 all decumbent or procumbent.

I am very much obliged for  
 the copy of Diplacus. I  
 did not suppose it would be  
 a short article which I  
 might ask you to devote  
 valuable time to transcribing.  
 You are very kind.

I am told you have done  
up Dodeca them after a  
new fashion; and I feel  
like thanking you for having  
taken off my hands a piece  
of work which I feared to  
undertake altho' thoroughly  
convinced of the need of its  
being done. So let me see  
your paper when printed.

They say you admit five  
species. I have been certain  
of four; but not more.

Yours as always

E. L. Greene

University of California,  
COLLEGE OF AGRICULTURE,

Berkeley, Sept. 29, 1886.

Dear Professor.

Yes, there is a well accepted genus  
*Harbressia*, of not a few years standing, in  
Fungi.

I owe no name in suggesting  
*Martindalea*. And I have a sort of reason  
for nominating him for your consideration.

I once started to dedicate a genus to him. (It was  
*Circulandia*,) mentioned my thought beforehand,  
and he was told to ask to see the thing before  
giving consent; wherefore there will never be  
a *Martindalea*, Greene; nevertheless he is a good  
and useful man; very respectable every way, as you  
know perhaps better than I.

Yours very truly

Edw. L. Greene

University of California,  
COLLEGE OF AGRICULTURE,

Berkeley, Oct. 11. , 1886.

Dear Dr. Gray. -

I have been kept to my room for a week, by a pretty sharp malarial attack, partly resultant from too much physical hard work on those wondrous islands; meanwhile queries have been accumulating, from you, in regard to Sidalcea; and, as I am going to bed to-morrow, I will begin by writing to-night. As regards the tall Yucca plant, you are better off than I, for I have no specimen. My supposition is that it belongs to S. Oregona; and yet, may be it has a different pretence; any way, it will be for you, in your paper, to help me out on that, since you have a specimen.

S. Californica: not a bit of any such plant had I, or have I yet; nevertheless, I am sure I must have seen it, this year, at Mrs. Bingham's; but I scorned her specimens.



because they were barely in flower. She  
was confident she had two species under  
S. malvaeflora, and both collected at S. Barbara.  
Specimens of the latter, with anthers abortive  
are to be obtained in abundance, any year;  
and such have the corolla half(?) or twice(?)  
the size of the other state.

Lavatera from San Benito I know not; but  
the Guadalupe species and that of the Coronados  
I am familiar with. I alone have seen both  
growing wild; and I have no doubt of the validity  
of both; nor can I see how you have reason  
to expect variations between the digitately  
lobed leaf of the Guadalupe one and the  
pentagonally lobed one of Coronados. That  
is the strong point in my mind. The  
involucres are not so different.

It is a most marvellous flora, that of those  
islands; and these Lavateræ are not more  
astounding than, for example, some Cruciferae  
(that seem to belong to the Old World) which I  
was too late to get seen in fruit.



Oct 11/86

There is a Thysanocarpus on S. Cruz, with the margin of its mouth - so infolded that - the genus will hardly hold distinct - from the Asiatic Zauschneria. My samaras, dug out of the rubbish near the roots of the dead plants, have yielded three plantlets which are growing in a pot ~~is~~ my window shelf. And then is, on San Miguel, a shrubby Erysimum, in compact masses, six feet - through, that must be near an Asiatic species.

You ask my opinion of the Dendromecon Harfordii. I have given it its place as a species in my MSS. but I have not seen it, nor in Harford's specimens. Its habitat is S. Rosa (7 miles from S. Cruz!) and Harford describes it to me as very common there; but it has the rigid habit and the stiffness of foliage that belong to S. rigidum, of which it is no dwarf form. It is five or six feet high (he says) and with those broad, crumpled leaves, and short branches, and short peduncled flowers, it must be a fairly distinct plant, I suppose.

Yours as always E. L. Greene.

# California Academy of Sciences.

Post Office Box No. 2247.

San Francisco, - Oct. 26

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Dear Dr. Gray -

In response to your query,  
I send you a part of the one specimen which  
I brought home from Vidua. of the Sphaeralea.  
I saw no other malvaceous plant on the  
island, and this is not plentifully found.  
I do not wonder that you find "much to do  
with these things". Your "bundle" of Malvaceae  
+ Sphaeralea is one of my despair. And  
you have referred species to Malvaceae which  
I do not think belong to that or any other  
published genus. I wish you good cheer on  
your task, and shall be greatly interested to  
see the result of your labors.

As ever

J. L. Greene.

Berkeley, Nov. 5, 1886.

Dear Dr. Gray.-

In response to  
your inquiry: I have nothing  
of the Russian Sphaeralcea  
I am sure, altho' I thought  
he sent me everything. You  
have been very quick to have  
finished already that - and  
Malvastrum. There was a  
little of M. Thunbergii on S. Cruz,  
but no other malvaceous plants -  
whatever; otherwise I should  
have sent you specimens; for  
you asked for them. I shall  
be very eager to see your papers,  
and shall be helped greatly by  
them, no doubt; for beyond  
Sidalcea I have never worked  
in Malvaceae. I have to-day  
done the last proof-reading of

any heavier - and hardest - under-  
taking yet made; the subject-  
being Mr. Watson's "Brodiaea",  
a thing which has crossed my  
mind since the publication of his  
N. Am. Liliaceae, and Bot. Cal.  
I am not yet satisfied perfectly,  
except as regards the two genera  
Brodiaea and Hookera. But you  
can see it all a week or ten days  
hence.

Yes; you owe me letters; but worse  
than that: you gave no heed at all  
to my petition for something to show  
me what true Selphium simplex is.  
And the Crocus Andrewsii you  
have forgotten all about. You  
sent a head of C. Anderssonii (which  
I had plenty of) then I repeated  
my request, and silence followed.  
One thing more, yes, two:  
Krynitzkia plebeia, one calyx  
even with nuths(!), and



lastly: (for the present-) can  
you make, in my favor,  
a division of your Malacothrix  
incana, if I repay you with  
all you want of it- collected by  
myself? I would give, if  
need were, half of my twenty  
duplicates (from San Miguel) for  
a fair piece of the Vuttallian  
original from that "Island(??)  
in the Bay of San Diego".

Yours very truly  
Edw. L. Greene.



Berkeley, Nov. 26. 1886.

Dear Dr. Gray.-

Thanks, indeed,  
for even the privilege of a look  
at those Nuttallian specimens of  
Malacothrix incana. I wanted  
you to give me one to Kuf;  
but- you do not seem willing;  
at least, you have not said I may;  
so I return them intact, and  
with them better specimens,  
one from each of my islands.  
As for the Delphinium simplex,  
you have none of it for me, but-  
your remark that- it = D. distichum,  
suffices; for that species I  
had recognized, and admitted-  
by that name into my M.S.

I am sorry you will be displeased  
with my treating of Brodiaea  
+ Hookera; really sorry, for  
I dislike to give annoyance  
to you, who have labored so long,  
so zealously, and so fruitfully,  
in this great field. But what  
am I to do? I keep silence,  
let all that I know about  
these things remain untold,  
and wait for some body else  
who has not a tithe of my  
knowledge of the plants, by and  
by do something? Really  
you cannot, in reason, expect  
it, I am sure. Yet, I will  
not trouble you with words of self-  
defense; and you must be  
forbearing as you can be.

Yours as always  
E. L. Greene

Berkeley, Dec. 16. 1886

Dear Dr. Gray:-

Many thanks for the *Malacothrix* specimen which you have returned for me to keep. I am a worshipper of "saints and relics", hence my desire to have this specimen, with Nuttall's autograph. It is the only one I have.

It is probably too late in the season, or I should ask you to help me out of trouble by sending me fresh fruit of Symphoricarpos racemosus from the east. I apprehend our Californian bush is quite distinct-

from it. It is far more abundantly  
fructiferous, and its pedicels (very short)  
are whitened and spongy-pulpy, as if a  
part of the sarcocarp itself, a character  
which I do not think the eastern plants  
exhibit. But, it is doubtless too late  
in the year for you to settle this  
question for me, by examining a  
bush, if indeed you have one growing  
near by you.

Is your printer not at work, I am  
wondering. I long to see some of  
the fruit of your past year's industry.

As ever, E. L. Greene

P. S. Have lately been favored with change of  
title at the U. C. (which is of no account-) and  
an increase of salary, (which is very good,  
to help me to <sup>buy</sup> more books.)

Berkeley, Cal. Dec. 18, 1886.

Dear Dr. Gray.-

Mrs. Curran not-  
being acquainted with any  
"Myosurus alopecuroides, Curran,"  
has passed your letter over  
to me. I therefore enclose  
a specimen of the desideratum.

From your remark to Mrs. Curran,  
that you have returned to the  
Polyptalae, I should infer that  
that ~~the~~ volume of the Syn. Fl.  
is now to be hoped for.

I should be ashamed to repeat  
so soon my question about-  
a possible new Botany of this  
coast from your side of the con-  
-tinent, had not Ivison, Blakeman  
& Gaylor's agent in S. Francisco  
lately told me that Mr. Coulter,  
having finished "Colorado" is now  
engaged on a similar work for



Pacific states, or California.

If this should be true, I  
ask that you tell me so.

I will at once desist - from  
the pursuit of my own under-  
-taking, if it is so.

Yours Very Truly

Edw. L. Greene.

Berkeley, Dec. 22. 1886.

Dear Dr. Gray.-

As for the publishing of Eschscholtzia ramosa, it is already done, vide Bull. Geol. Club. for Nov. '86.

I did not think of sending you the Baeria Burkei until next year, when I hoped to have real specimens, not mere fragments only. The youth sent me at the first one nice large specimen (2 feet high) but too young. I saw it was new and asked for more, and he went out this time and broke off tops! I send you some of the latter, and you can see the excellent character of stems and pappus.

I am nearly as badly off for

specimens of *Matricaria occidentalis*.

The last time I was out in the region where it grows I said to myself: it is too like *M. discidea* in character to be a foreigner; and so I took a large and a small specimen, to study and compare. You know the result, and, since you ask for it, I send you the small specimen, hoping to furnish you with better next year. It is a good species without a "character", standing on its habit and its properties; and I like such species. Every one such stands as an emphatic, living protest against the artificiality of our accepted system of classification — "natural" we call it, and perfectly natural it may be when here and there, genera as well as species shall be freely admitted, in despite of their lacking what we call "a character".

*Calais Clevelandi* you will perhaps find that you have plenty of, under

C. Lindleyi. There is then also no great difference between the two in achenes and pappus. Yet, in spite of all that, the two look so different when seen growing and spreading at their joint, that one can not submit to let them pass as one species. I hate to point out to you that C. Clevelandi has its peduncles small at top (not thickened under the involucre), and that this is its best character as a species; for you will retort that so one of my partitions gives way between Microusis & Calais.

I enclose in the parcel now sent, an oldish specimen of Grindelia integrifolia, Willd. which you treated most shabbily in the Syn. In spite of my protest that it is a species. Why put it into glutinosa, any way, when it is the only species which is wholly devoid of glutinosity?

Yours as ever

D. L. Greene.

University of California,  
COLLEGE OF AGRICULTURE,

Berkeley, Dec. 31, 1886.

My Dear Mr. Watson.

Your tracing of *Thysanocarpus erectus*, just received, is very satisfactory, leaving in my mind no doubt about the distinctness of my little *T. conchuliformis*, of which I herewith enclose as good material as I possess, in return for your kind favor. I am sorry if, in the *Streplanthus* matter I have named as new the wrong plant. That which properly answers to Hooker's figure is by far the most common, and without any irregularity in its calyx; and my impression is that the figure was made from a living plant - grown from seed, in which case I can not see how the character of the calyx could fail to obtain recognition and representation. But - you, if you have seen the original specimens, have the best means of knowing; so I can not question your judgment. Please address me at Berkeley (not S. Francisco) when I can serve you. Yours as ever L. L. Greene.



I have been struggling with  
Grifolium for two weeks past,  
and have reached satisfactory conclusions  
in some of the groups, but am almost  
in despair of that which begins with  
that enigmatic name G. involucreatum, W.  
and what is harder a great deal to  
find out, than the limits of species,  
is the names that belong each to each.

Yours Very Truly

Edw. L. Greene

Berkeley, Jan. 30, 1887.

Dear Dr. Gray. -

I have your  
postal card about Delphinium.  
You ask for my bundle, and  
then, in June, sum to recall  
the requisition; and I really  
think it would not be worth  
the trouble and expense.

I sent you, last spring, what you  
then asked for, even dividing  
with you, specimens which I  
did not like to mutilate; but  
to that sending I could not  
now add much that would  
be likely to help you. It is  
not that I have any new m. or sp.  
or any items that I wish to  
publish of my own accord.  
I do not make out any more  
species than then seem to

to be  
have names for, now that  
I have given name and place  
to your still unpublished D.  
hesperium, according to your  
instructions of last spring.  
The one whose spreading or rearing  
pods so puzzle you is an  
very commonest - Coast Range  
plant - and there is no other  
species so well marked, to the  
casual observer. I suppose there  
is little use in naming to you  
plants that are seen only in the  
living plant: nevertheless, the  
most striking characteristic of  
it is the peculiar light green  
(with almost white spots at the  
sinuses) of its foliage. Only  
one other of our species has those  
marks, and that is D. nudicaule.  
Indeed, when out of flower, you

can hardly distinguish between  
them. D. nudicaule has just  
such pods too; so that this  
plant - is surely more related  
to this red-flowered one than  
to D. bicolor, as I look at them.  
You will tell me if you think  
me wrong in my inference that  
it is D. decorum, F. & M.

But - I have a geographical  
argument - that is conclusive.  
It is the only blue, or purple  
leaved form inhabiting that region,  
except your D. hesperium; and  
yet, it extends even to the Sierras;  
always growing in shady places,  
beside oaks.

This is discouraging; to have questions  
coming at a date when I was  
looking for some such good thing  
as a printed monograph!

Berkeley, Feb. 12. 1887.

Dear Dr. Gray:-

As regards the  
Papaver, I was not proposing  
anything whatever with ref-  
erence to it. It will be very  
interesting if you do find it  
a real good, indigenous species.

You add to the interior penance  
I have been doing ever since  
Orcutt's last number came  
out. I wrote, hastily, months  
ago, those Echinozystis notes,  
myself irritated at the time  
by having been made, without  
my knowledge, part-author  
of a genus which I did not  
and do not believe in. True,  
I had once suggested the  
name for it, but I had  
later published any say.

first-page, to prepare your mind.

Yours Sincerely

Edw. L. Green

When Orant was here, worrying  
me for something for his paper  
I handed him that-, and he  
went off to S. Diego with it,  
and I thought- no more about  
it-, and did not even see a  
proof.

If I have, as you  
think, given a wrong im-  
-pression, I shall humbly  
submit to your correction if  
you deem correction useful; but  
I shall mail you, two days  
hence, a proof of my revised  
edition of that- scratched paper,  
which is now in the printer's  
hands.

Very glad you are printing.  
To save you the shock that  
might attend the appearance  
of the first number of  
Pittoria (with all its mysteriousness)  
all complete and in course, I  
put in now the proof of the

San Francisco, Cal., Feb. 26 1887.

Dear Dr. Gray. I am sending out the second signature of *Tillandsia*, i. and shall soon be done with the first part. Then, immediately I shall do some distributing of specimens. You will want the *Hazardias* and the two new vascular *Zauschnerias*, etc. So while I am sending a parcel, or getting ready to, let me know if you now foresee need of anything soon from this way, that will may go at one sending.

Yours very truly  
Edw L. Greene



Berkeley, Feb. 28. 1887

Dear Dr. Gray:-

In reply to your  
note of the 20<sup>th</sup>:

Yes, I hold it quite  
safe to publish such a Trifolium  
on one specimen. I will lend it  
to you if you want to take up  
the subject; then you can judge.  
But, it is too late to "advise" about  
that. If, however, you are kindly  
disposed to advise I will listen  
attentively to you, concerning a  
point - whenever it is not too late.  
And the query is this: Why you  
did not, in treating those  
Eritrichae, so much as mention  
Lehmann's generic name  
(Cryptantha?) I have always  
wondered if it was from lack of  
determ. specimens to prove its

"Why Pittoria?" Well, that - is a hard question, who? I was half expecting it - from you. I can not answer. It is an easy name to speak and to abbreviate, and that is enough. "Hesse Boc. Am Acad." Over. Cal. Acad., and all that, - are cumbersome!

Now again; I believe in the "dark ages", and always ~~did~~ <sup>did</sup>; and not, in our way, well disposed toward revolutionists like Luther and Genevieve; have a sympathy for Gurneys, Duncans etc. etc.; and ~~that is about my stock of poor reasons for Pittoria.~~ <sup>then, all</sup> L. L. G.

identity with Krynitzkia; or whether you wished to have it an "obscure name" [as you have somewhere written], notwithstanding its eight or nine years of priority over Krynitzkia.

Now I am confiding in you, as I like to, and beg for a reason; meanwhile withholding from my printer a considerable lot of manuscript on these plants.

I planted, ten days ago, some seeds of a new Calais from Santa Cruz Island, and they germinated so promptly that I send you some. You will find, when they are not broken off, a supplementary bristle or awn, on each side of the main one, and almost no notch to the pith.

Yours sincerely  
Edw. L. Greene.

March 22, 1882.

Univ. of California.

COLLEGE OF AGRICULTURE.

Contrib. just in, the delay of which, under the circumstances, has made me very uncomfortable; and I must apologize now in the June Post of Pittsburg. I thought the two papers would cross each other on the way, at least: hence my humiliation; but it will have taught me caution for the future. You will have received the Hazardias (with which you must be pleased) and some other excellent things before now. E. L. G.

NOTHING BUT THE ADDRESS TO BE ON THIS SIDE.



Dr. Geo. Gray  
Cambridge

Massachusetts.

Berkeley, June 27, 1887.

Dear Mr. Watson.

I have lately been awaiting anxious inquiry, in the neighborhood of Washington, for the promised list of names for Dr. Palmer's plants of 1886, the fascicles of which have been lying on my shelves, unavailable for study or distribution, waiting for this list, for long months.

Dr. Vasey refers me to you! He says no list is to be looked for except what will appear in your next Contributions; which is, of course, satisfactory enough, if we may hope to see those Contributions in reasonable time.

You will see by the enclosed pages which I have just matched from my printer's table, that another installment of "Sitonia"



is about ready.

I perceive I shall have to withdraw this thing from my list of exchange correspondents. If I begin there can be no ending until the last name on my list of botanical friends is reached; and the venture is too costly a one for that.

My first subscription came from your state library in Boston; so that the pages will all be available for reference, in case you do not care to have your name go on the subscriber's list.

You have probably received my "Studies" no. 1, a copy of which was mailed to you among the first; these will be continued, and, as they are printed without cost to me, are always communicated freely to all supposed to be interested.

I am hoping to see something from you soon, I am  
As ever Yours E. L. Spence.

is really the H. cuneata & C.  
I suppose it must be the  
same; but I detect no  
difference save that of color  
of flowers, between it and  
ordinary H. hirsutifolia.

There are acres of it near  
San Pablo (10 miles north of  
Berkeley) and no white  
flowered plants at all in  
that district; but in other  
localities the two grow together,  
though the white flowered  
form is by far the most  
common.

The new Bigelovias will, I guess,  
stand on their own obvious merits;  
though when Mr. Parish brought

Hemizonia parvifolia is also so  
very common in the mountains  
of Kern + adjacent - counties  
that it is not easy to believe  
that I am the first - collector  
of the species. It could not,  
however, possibly get mixed  
with any species except its  
very close ally H. virgata,  
from which, so far as floral  
characters go, it differs  
only in the size of heads and  
number of flowers. But in  
foliage, pubescence and  
habit it is so unlike, that  
I can not entertain a  
doubt of its being distinct; &  
I conclude that, however

can turn most of it over  
to Dr. Gray I think.

Sincerely Yours

Edw. L. Greene.

It will be seen that - I have  
been permitted to enjoy a  
first-look into some of  
Mr. Pringle's Calif. gatherings.  
Both the Saxifraga and the  
Raillardella are splendid  
acquisitions; the latter of very  
great interest as showing, by  
its Helenioid rays the true  
place of the genus. But I  
find, in Bolander's relics, a  
specimen or two of R. scaposa  
with each a few small pale  
yellow rays!!!

forward his specimens

I said, too hastily, H. Douglasii.

but I am persuaded the  
thick, gummy leaves to be those  
of anything rather than  
Douglasii, & that the involucral  
scales have a different char-  
-acter, and that the number  
of flowers to the head is just  
twice as great. The bushes  
are said to average about  
8 feet in height.

Madia Pringlei, Greene is perhaps  
too similar to M. Bolanderi, Gray,  
but they seem to have a different  
~~leaving~~ arrangement of leaves,  
some difference in pubescence,  
besides a good deal of divergence  
in character of stem and  
happens.

Viguiera flexuosa I feel a  
doubt about, because it has  
a half-familiar look as if

I had seen and collected it-  
myself, remember; but it  
is certainly a Vigniera and  
no such species can I find  
described anywhere.

Hemizonia spicata. Have you  
anything like this in your  
bundle of H. multiglandulosa?  
Greatly as the latter be admitted  
to vary, this can hardly be  
included with it. Its ray  
brines are very large, and  
strongly villous; moreover  
the herbage is strongly  
fragrant. All the forms of  
what I accept for those of  
H. multiglandulosa, have one  
common, unpleasant odor.

Zigadenus fornicifolius, does not  
answer to the description of  
Z. volcanicus, or any other  
Mexican plant, and I guess

you will not even question  
its right to a name as  
a n. sp. of Zigadenus.  
Early last spring in the  
Mojochar Mts. I observed this  
plant, when its thin, pale  
garlic-looking leaves were only  
a few inches above ground.  
The dead stems showed the  
dry perianth still persistent-  
upon the bases of the empty  
capsules, and I said to  
myself "Zigadenus fornicifolius  
n. sp. if of that genus"  
which I doubted on account-  
of the peculiar connection of  
the perianth with the base  
of the ovary. But Mr.  
Rusby's flowering specimen  
shows that the thing can  
not go into any other genus.  
This is truly, a formidable  
looking letter; but you



University of California,  
COLLEGE OF AGRICULTURE,

Berkeley, 27 June, 1888.

Dear Mr. Watson.

Your postal card must needs be answered; for it assumes that I have contributed two plant specimens, this year, to the Gray Herbarium, a thing which I had no intention of doing.

Merely to help you avoid making a synonym or two, I sent those two fragments, at the same time hoping to indicate, faintly perhaps, but not unintelligibly, the possibility on my side, of a cessation of certain outward appearances of hostility between us, and of a return to the former letter ways of kindly thinking and writing each of the other.

I am, however, compelled to understand that there exists, on your side, no such possibility, and that you refuse to meet my very first advance. If I am wrong in this, you will surely correct me. Very Sincerely Yours Edw. L. Greene.

It is in reference to *the C. rodmanii*; and  
am perfectly confident that the injustice  
you do me, is done unconsciously. But, if  
men do such things innocently, so much  
the more need, as it seems to me, that that  
kind of misdoing should have its injustice  
held up to view. It is so common with  
American botanists that, I believe, no one thinks  
it wrong; hence my determination to take,  
before long, some opportunity of discussing it; other  
opportunities will be given. The point, as far

as relates to your paper, is this: in the first-  
in question, I discovered and published  
certain characters, namely, the total inde-  
-hisence of the pod, and the nearly obsolete  
partition. These are very important  
contributions to the history of the plant.

If I named it as a new genus it was  
on these two grounds, along with the

prostrate habit. These three characteristics  
are entirely ignored by you; and that is ignoring  
my whole stock of facts. My conclusions, that  
it is one genus, you are not bound to. That  
is unimportant. That you are unable to  
second my view is not my affair at all.  
I do think, however, that justice <sup>to me</sup> demands  
the recognition of my facts, if facts they be.

Berkeley 12 July 888.

Dear Mr. Watson—

I am under obliga-  
tions to you for a letter, and a copy of  
your latest "Contributions", which letter I  
had already taken measures to procure  
as soon as I had learned that it was  
extant and had not been sent me by  
the author. I think I ought to  
say further, in reference to the two specimens  
I sent before, that I had no idea they  
would reach you too late to be brought  
into comparison with the Pringle specimens  
before your publishing. I assumed that  
Pringle's and Palmer's plants would be printed  
by you, in our aid the same "Contributions"  
and I knew that you had not yet come  
to the naming of Palmer's; I was still  
postponing the printing of anything in  
relation to Palmer's set, which I have  
with full notes, in deference to you.  
But your paper on Pringle's collection, it

now appears, find here three notes in  
print when my letter and specimens  
reached you; and so I was too late.

You lay upon me all the  
responsibility for that lack of cordiality  
which has existed between us; and that  
I judge to be wrong, yet, am not  
going to open a private controversy, by  
attempting to write a word in my own  
defense, or by making detailed com-  
plaints. Your time and your energies,  
and mine too, may be more profitably  
occupied.

I do not regret having opened  
up a line of criticism of the doings of  
botanists here and there. I began that  
because I thought the interests of this  
cause loudly called for it. I shall  
not doubt continue the work, difficult  
and unpleasant though it be. But I  
do regret some of my own too pungent-  
phrases; needlessly, and, worst than  
that, heartfully irritating expressions.  
My only apology would be that I am

of strong sympathies, and not careful  
about the weapons I may employ, when  
a sense of duty has impelled me to undertake  
the defense of a weaker party.

May be I shall, henceforth, be able  
to maintain the better spirit in which  
I have criticized, as you will see, the  
"Verny Club Catalogue".

I did not send these papers before,  
because I did not feel at all confident  
they would gain a perusal or be otherwise  
than unheeded. Since before this  
year, I had to ask for your "Contributions"  
before I got them; hence my judgment  
that it would be forcing things upon you, if  
I sent.

In some remarks, now in manu-  
script, on your "Contr. xv", (of which I had  
borrowed a copy) I have made one point in  
my own defense, which I shall now  
call your attention to, and then erase it  
from the printer's copy. It will be the  
better way, since you allow me to write.

July 14 88

and that - justice to science requires that you deny them. If you find that what I gave for facts and new facts, are only my imaginations. I really think that, if you will look into this matter, you will see that you have exposed yourself to criticism by not writing into the character of your ~~literature~~ the essential characters which I indicated for it as a genus. But, as I have intimated, when I am ready to take up such a matter publicly, I shall find no dearth of illustrations; for American botany abounds in them.

A few duplicates of plants of my own collecting within the past two years will be forwarded to you shortly. Do not trouble yourself to acknowledge receipt of them. They will go into the Gray Herb. naturally, I suppose; unless you find them needless duplicates.

It is clear as can be, from the peak flowers, that *Trifolium appendiculatum*, of which I sent specimens, must be admitted as a species; and I guess it is somewhat rare and local.

Very sincerely, S. L. Greene.



July 14, 88.

Dear Mr. Greene,

I have your favor  
of 27<sup>th</sup> ult. in which you refer  
to ~~express the terms of relationship~~  
<sup>fulfilling</sup> personal relationship between  
us. ~~And~~ In reading the plants previously  
there was no reference <sup>made</sup> to this matter  
& I could not infer an implied  
connection.

As to the "outward appearance of  
hostility between us" I am not  
conscience that there has been  
any upon any side. In all  
my botanical writing, & doing  
I have always studiously avoided  
personalities of every kind, in reference  
to yourself as to every one else. I  
have said & done nothing that evinced  
hostility to you, as I have felt  
none. And as I have done nothing  
to provoke the hostility which



you have shown so I can  
do nothing to placate it. I  
have not noticed it hitherto, ~~or~~  
without any intention of doing so.  
As it has been wholly unprovoked  
as its cessation must be an  
voluntary on your part  
as far as I am concerned.

Yrs. very Truly  
Henry Graham

am in need of seeing all  
you publish, and, at the earliest  
moment.

Up to that day, I had  
sent you, as to other, each  
article of mine as soon as  
issued. But, inasmuch as  
it was the third successive  
instance of your papers  
being sent to all other  
Californian botanists; and  
above excepted, self-respect  
demanded that  
I discontinue an altogether  
one-sided exchange.

There is a possibility  
that you have, in each instance  
done your part; and that mail  
agents are at fault; and it is in  
view of such possibility, that I resort  
to my own good will and purpose.

The distribution of the "Ducks" has been, for the present  
discontinued, awaiting a Supplement; and the distribution,  
which had not gone  
on, will be resumed  
by next October, I trust.

Yours sincerely  
D. L. Greene

Address:  
Berkeley, California

Denver, Colorado  
25 July, 1888

Dear Mr. Watson.

I have just  
this moment received a letter  
from your townsman, Mr.  
Deane, in which he tells  
me you were inquiring  
of him about the latest  
issue of Pittoria. He is  
under the impression that  
it is due you, as an ex-  
change paper; and I, for  
my part, really wish it  
were, — or that there

may be nothing more than  
postal mishaps in the fact-  
that, for two years past, I  
have received none of your papers  
without either asking you  
for them, or (as in the last  
two instances) sending to  
a dealer for them.

The case of your latest  
issue was one of very great  
and annoying inconvenience  
to me. Late in March I  
was printing an article,  
had, indeed, read the last  
proof, when in one of the  
Journals, I read a notice  
of your paper on *Palmer's*

*Gymnema*, *Plants*, etc.

Some of the species had lately  
been duplicated to me, in  
Lieut. Ponds' collection, and  
I was publishing them.

When I knew your paper was  
out, and had been for six  
weeks, I had to telegraph  
to my printer to stop, and  
then went in search of Mr.  
Lumman, in whose hands I found  
the desired paper. By destroying  
one page of what was to have  
been irrevocably printed that-  
very day, I saved myself  
from "cross-printing", and  
making several synonyms.

I speak of this to show  
you how very much I



Redding, Shasta Co. Cal.  
4 Sept., 1888.

Dear Mr. Watson. —

Your recent letter has been forwarded hither, where I am stopping for a day or two, on my homeward way.

It is a relief to be able to lay upon Dr. Vasey the blame of all my trouble and annoyance about your last series of papers.

Yes, I am always a purchaser of Dr. Palmer's collections; but, let me beg that, another time, you send me my copy direct, not trusting Dr. Vasey, or any other man.

Since I am all the while publishing, there is too much risk of synonym-making.

Dr. Gray used latterly &

send me final proof of all his  
papers, to print "cross-printing",  
as he called it. On this account  
I have all along been sending you  
advance sheets, as soon as issued.  
I could not expect to reach if you;  
but should be content, and quiet  
even if not very late to learn of  
your doings, first in the reviews  
of them, then through copies borrowed  
from my neighbors.

No; I was well aware  
you did not intend Mr. Deane  
should communicate to me your  
complaint; and my mention of  
his name to you would have  
been a little unjust to him, even  
for this one thing. He is a warm  
friend of yours, evidently, and a  
most genial correspondent of mine,  
so that it was not of your kindness  
to tell you and me, that he made  
mention of your complaint.  
The fact that he did so has



Sept 4, 1889



now, you see, let to the correc-  
-tion of a misunderstanding; and  
I am confident he would have  
been more than willing to be accessory  
to such a result. This, I repeat  
it, is my own excuse for having  
made the allusion I did to his  
letter.

Very Sincerely Yours  
Edw. L. Greene.

are flat.

~~But~~  
Under the name of Ribes aureum  
Pursh, I believe two species are  
enfolded; one with red-petaled  
very fragrant flowers, and dark  
purple, edible fruit; and one  
with flowers all yellow, and  
~~perfectly~~ scentless, the berries  
clear amber color, insipid  
to the taste. There is a difference  
too in the shape of the berries.  
The yellow berryed is the only one  
I have seen in Cal. and is the  
more common in Colo; but  
I have never been able to get  
sufficient material for a good  
study of the plants, since I began  
to doubt their specific identity.  
I am collecting in the vicinity of  
Yreka, very diligently; have  
already made specimens of some  
300 species; shall have perhaps

6, in 8 sets. A valued correspondent  
in Austria begged me to procure  
if practicable, plants by the hundred  
for three or four friends of his  
who want to pay for them in  
gold. I never sold a specimen  
in my life. Pray tell me what  
I ought to ask per hundred?  
if I have by and by several hundreds  
for each of those gentlemen.

I dare ask you. — What has  
become of Mr. S. Y. Olney? Do you  
know? I have not heard a word  
about him for three years, almost.  
If you tell me he is alive and  
well I shall write to him. I  
have Cacti and other plants  
for him; but he has not sent me a  
letter for nearly three years.

With many, many thanks to you,  
and to everybody else to whom I am  
indebted for this magnificent book  
I remain Sincerely Yours,  
Edw. S. L. Greene